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BRITISH PHARMACOPŒIA.

BRITISH PHARMACOPOEIA, 1864

When the Medical Act of 1858 established the General Medical Council, it enjoined the Council among other things to publish a single pharmacopoeia to supersede those of London, Edinburgh and Dublin. The task of reconciling the differences between these pharmacopoeias was formidable and this, the first edition of the British Pharmacopoeia, contained so many imperfections that half of the 28,000 copies published were destroyed and a loss of £1,206 was incurred.



BRITISH PHARMACOPŒIA

PUBLISHED UNDER THE DIRECTION OF THE

GENERAL COUNCIL

OF

MEDICAL EDUCATION AND REGISTRATION

OF THE UNITED KINGDOM

PURSUANT TO

THE MEDICAL ACT, 1858.



LONDON:

PRINTED FOR THE GENERAL MEDICAL COUNCIL BY

SPOTTISWOODE & CO., NEW-STREET SQUARE, E.C.

1864.

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By the Medical Act, 1858, Sect. LIV., it is enacted :—

‘ The General Council shall cause to be published under their Direction a Book containing a List of Medicines and Compounds, and the manner of preparing them, together with the true Weights and Measures by which they are to be prepared and mixed, and containing such other Matter and Things relating thereto as the General Council shall think fit, to be called “ British Pharmacopœia ; ” and the General Council shall cause to be altered, amended, and republished such Pharmacopœia as often as they shall deem it necessary.’

By the Act XXV. and XXVI. *Victoriæ*, Cap. XCI., which recites amongst other things that different Pharmacopœias have hitherto been in use in England, Scotland, and Ireland, and that the Pharmacopœia to be published by the General Council is intended to super-

sede the above-mentioned Pharmacopœias, it is enacted :—

Sec. II. ‘The exclusive Right of publishing, printing, and selling the said Pharmacopœia shall rest in the said General Council, subject to this Proviso: that it shall be lawful for the Commissioners of the Treasury from Time to Time to fix the Price at which Copies of the said Work are to be sold to the Public.’

Sec. III. ‘The *British* Pharmacopœia, when published, shall for all Purposes be deemed to be substituted throughout *Great Britain* and *Ireland* for the several above-mentioned Pharmacopœias, and any Act of Parliament, Order in Council, or Custom relating to any such last-mentioned Pharmacopœias shall be deemed after the Publication of the *British* Pharmacopœia, to refer to such Pharmacopœia.’

THE GENERAL COUNCIL

OF

MEDICAL EDUCATION AND REGISTRATION

OF THE UNITED KINGDOM.

MAY 1863.

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PREFACE.

OF the several functions conferred on the General Medical Council of the United Kingdom by the Medical Act of 1858, not one has caused the Council more anxiety than the preparation of the British Pharmacopœia. To supersede three Pharmacopœias, each of them long held in great repute,—to reconcile the varying usages, in pharmacy and prescriptions, of the people of three countries hitherto in these respects separate and independent,—to consult the prepossessions of three important public professional bodies, which have ruled long and ably over this branch of Medicine,—to represent accurately, yet with caution,

the advancement made in chemistry and pharmacy during the thirteen years which have elapsed since the last edition of any of the Pharmacopœias of the Colleges of Physicians was published,—has been no light task.

The measures which it was thought advisable to take for meeting all these difficulties have occasioned considerable delay in completing the duty thus imposed on the Council. Numerous researches in Chemistry, Pharmacy, and Natural History, and into the value of old and new remedies, carried on with the complex machinery of a Committee in each of the three divisions of the kingdom, necessarily occupied much time. To these, the principal causes of delay, were added difficulties arising from the present state of the Law of Copyright, which obliged the Council to apply to the Legislature for an Act of Parliament to enable them to give authority to the British Pharmacopœia, and to secure a title in the copyright. Further delay was

subsequently occasioned by the necessity of altering, in deference to the general wish of the Medical Profession, the Pharmaceutic Weights which the Committee had previously adopted in the composition of the Work.

By exercising more summary power, the Council might have chosen a shorter way to their object; but, for the discharge of a duty of no little delicacy, they preferred the method which seemed most likely to be acceptable to the Medical Profession, although at the cost of delay which might otherwise have been spared.

It was resolved that the British Pharmacopœia should consist of Two Parts and an Appendix: the First Part to consist of the *Materia Medica*; the Second, of the Preparations and Compounds; and the Appendix, of articles which are employed for the chemical processes in the Second Part, but are not themselves used in medical practice, and of preparations solely intended for the chemical

examination of the articles contained in the First and Second Parts.

The *Materia Medica* contains, in its simplest pharmaceutic form, every definite medicinal substance, whether obtainable in ordinary trade or prepared by the chemical processes in the Second Part, which the Committee of the Council found, on careful inquiry, to be so far approved in practice as to be entitled to a place in a National Pharmacopœia. Under each article are given :—1, A Latin Pharmaceutic Name, by which it may be prescribed ; and an English Name, for use in describing the processes in the Second Part ;—2, Its Definition, together with its Chemical Symbol if it be a substance of definite composition, its Botanical Name if it be a plant, or its Botanical source if procured from a plant ; and also, in most cases, a reference to a correct Figure of the plant, and a statement of the quarter whence the article is obtained ;—3, The Characters by which it may be distinguished

from all other articles of the *Materia Medica* ;—4, The Tests by which it may be ascertained to be of due strength, and free from known impurities or adulterations ;—and, 5, The Preparations of which it is an active ingredient.

The Second Part comprises Processes for the forms in which medicines may be used in extemporaneous prescriptions, and for articles in the *Materia Medica* obtained by chemical operations. The Committee of the Council took into consideration the question, whether the late transference of the manufacture of most chemicals, from the pharmaceutic chemist to the chemical manufacturer, might not be a reason for withdrawing a great part of the chemical processes from the *Pharmacopœia*. On mature consideration it was resolved to retain them ; and the Council approved of that resolution.

The contents and construction of the Appendix do not require further explanation.

At the commencement of their undertaking, the Pharmacopœia Committee perceived that, as the three Pharmacopœias of the Royal Colleges of Physicians differed materiall, from one another in the Nomenclature of the Materia Medica, in the Pharmaceutic Weights recognised by them, in the Composition of many Preparations essentially the same, and above all in the Strength of not a few preparations and compounds, an amalgamation of the whole into a British Pharmacopœia was impossible, without subjecting the prescribers and dispensers of medicine in all parts of the kingdom and colonies, to inconvenience for some time after the completion of the act of reform. The Committee, therefore, thought the occasion favourable for introducing other changes besides those inseparable from the act of amalgamation; and they have not hesitated to extend the changes, when they could thus either lessen the chance of practical mistakes, or consult the ultimate

convenience of all branches of the Medical Profession.

The Council, while concurring in these views, trust that no one will complain of being thus compelled to take up again his Pharmacopœia and study it attentively. This is the inevitable consequence of the widespread and reasonable demand for a National Pharmacopœia. After all, the inconvenience will be only temporary, and will be compensated by various new facilities. These facilities, in which the Public at large will share, as well as the Medical Profession, are for the most part too obvious to need mention.

The alterations, which have occasioned most anxiety to the Council, are those which affect the Strength, and therefore the Doses, of dangerous medicines. Three measures have been adopted for securing the public against the risks which might arise from such changes. In the first place, important changes in the

strength of dangerous preparations have been carefully noted. Secondly, when change was inevitable, the weaker form has been preferred to the stronger. Thirdly, an attempt has been made to assimilate the strength of preparations of the same pharmaceutic form, in order that they may be prescribed in similar doses. The Council regret that difficulties of detail have hindered their Committee from carrying out this principle systematically; because uniformity of medicinal strength in preparations of similar form would be a great safeguard against dangerous mistakes, as well as a great facility alike to the prescriber and dispenser. Nevertheless the contemplated improvement has been effected extensively, especially in the preparations where it was most required. Thus, among the tinctures, those made with dangerous ingredients are with few exceptions brought to one standard of strength, so that an ordinary dose is from fifteen to twenty-five minims; while all tinctures made with

substances of no great activity are left, as formerly, uniform in strength, so that an ordinary dose is from one to two fluid drachms.

Under any circumstances it would have been necessary on this occasion to revise the Pharmaceutical Weights and Measures of the kingdom. But change became imperative for one division or another of the country, as the Dublin College of Physicians, in their last Pharmacopœia, had led the way by adopting for the first time in Pharmacy the Imperial Weights for the ounce and higher denominations; a departure from long established usage which appeared to the Council judicious and worthy of imitation.

The three Colleges had long agreed in adopting the Imperial Measures for every denomination above the Fluid Ounce. For the latter denomination a convenient subdivision had been also based on the old pharmaceutic principle that each Fluid Ounce should consist of eight parts, called Fluid Drachms, and each of

these of sixty parts, called Minims. It was impossible to improve that now familiar division.

The Council, in resolving to adopt for Pharmacy the Imperial Ounce and Pound, could not assimilate the subdivision of the Ounce to that of the Fluid Ounce without substituting a new medical grain for the Troy grain, hitherto the medical as well as the standard grain of the kingdom. This alteration they did not consider advisable; it has therefore appeared to them a necessary consequence, that the drachm and the scruple, the old denominations of weight between the ounce and grain of Pharmacy, must be abandoned, since they can no longer exist as both simple multiples of the latter, and integral parts of the former. Accordingly, all who prescribe and dispense medicines, are recommended to discontinue henceforth the use of the drachm and scruple weights.

The Weights and Measures of the British Pharmacopœia with their symbols will now stand as follows :

WEIGHTS

1 pound	. lb.	.	=	16 ounces	=	7000 grains.
1 ounce	. oz.	.	=	. .	=	437·5 grains.
1 grain	. gr.	.	=	. .	=	1 grain.

MEASURES.

1 gallon	. . C.	.	=	8 pints	. . . O.	vij.
1 pint	. . . O.	.	=	20 fluid ounces	. fl. oz.	xx.
1 fluid ounce	. fl. oz.	.	=	8 fluid drachms	. fl. drs.	vij.
1 fluid drachm	fl. drm.	.	=	60 minims	. . . min.	lx.
1 minim	. . min.	.	=	1 minim	. . . min.	j.

Temperature in all cases is to be determined by Fahrenheit's thermometer, and the Specific Gravity of liquids is to be taken at the temperature of 60°. All liquids are ordered by measure unless it is stated otherwise.

In conclusion, the Council warn all Apothecaries and Pharmaceutic Chemists, that on

the publication of the British Pharmacopœia it will be necessary, in order to discharge safely their duties to the public, that they should duly alter or destroy all pharmaceutical preparations made according to previous and now altered formulæ. The Council must further caution all Medical Practitioners, whether at home, or in the colonies, or in the public services, that, in order to exercise their profession safely, it is incumbent on them to make themselves familiar with the changes effected by the present Work.

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PART I.



MATERIA MEDICA.

MATERIA MEDICA.

ACACIA.

GUM ARABIC.

One or more undetermined species of *Acacia Linn.*

A Gummy Exudation from the stem; collected chiefly in Cordofan in Eastern Africa, and imported from Alexandria.

Characters.—In spheroidal tears from half an inch to an inch in length, nearly white, and opaque from numerous minute cracks, or in shining fragments; brittle, bland and mucilaginous in taste, soluble in cold water. The solution forms with subacetate of lead an opaque white jelly.

Test.—The powder does not become blue on the addition of solution of iodine.

Preparation.—Mucilago.

ACETUM.

VINEGAR.

Impure dilute Acetic Acid, prepared from French wines by the acetous fermentation.

Characters.—A liquid of a straw colour and acetous odour. Ammonia added a little in excess generally renders it slightly turbid and more or less purple.

Tests.—Specific gravity 1·008 to 1·022. It is scarcely affected by chloride of barium, or oxalate of ammonia, and not at all by sulphuretted hydrogen.

ACIDUM ACETICUM.

ACETIC ACID.

An Acid liquid prepared from wood by destructive distillation, and containing 28 per cent of anhydrous Acetic Acid.

Characters.—A colourless liquid with a strong acid reaction, and odour of vinegar.

Tests.—Specific gravity 1·044. One fluid drachm requires for neutralization 31·5 measures of the volumetric solution of soda. It leaves no residue when evaporated; gives no precipitate with sulphuretted hydrogen, chloride of barium, or nitrate of silver; and does not give rise to a blue colour, when added gradually to an equal volume of the solution of iodate of potash previously mixed with a little mucilage of starch.

Preparations.—Acidum dilutum, Oxymel.

ACIDUM ACETICUM GLACIALE.

GLACIAL ACETIC ACID.

Synonym.—ACIDUM ACETICUM, *Ed.*

Monohydrated Acetic Acid, HO, C₄H₃O₃.

Characters.—A colourless liquid with a pungent acetous odour, converted, when cooled to nearly 32° , into colourless prismatic crystals. Specific gravity 1.065, which is increased by adding to the acid 10 per cent of water.

Tests.—One fluid drachm requires for neutralization 97 measures of the volumetric solution of soda. It does not give rise to a blue colour, when added gradually to an equal volume of the solution of iodate of potash previously mixed with a little mucilage of starch.

ACIDUM ARSENIOSUM.

ARSENIOS ACID.

Synonym.—ARSENICUM ALBUM, *Ed.*



Characters.—A heavy white powder, which, when slowly sublimed in a glass tube, forms minute brilliant and transparent octahedral crystals. It is sparingly soluble in water, and its solution gives with ammonio-nitrate of silver a canary-yellow precipitate insoluble in water, but readily dissolved by ammonia and nitric acid.

Tests.—Entirely volatilized by heat. Four grains of it dissolved in boiling water with eight grains of bicarbonate of soda, discharge the colour of 80.8 measures of the volumetric solution of iodine.

Preparation.—Liquor Arsenicalis.

ACIDUM BENZOICUM.

BENZOIC ACID.

An Acid, $\text{HO}, \text{C}_{14}\text{H}_5\text{O}_3$, obtained from Benzoin by sublimation.

Characters.—In light feathery crystalline plates, nearly white, and with a strong odour of benzoin; sparingly soluble in water, but readily dissolved by rectified spirit; soluble also in the caustic alkalies and lime, but separating from these on the addition of hydrochloric acid, unless the solution be very dilute.

Test.—When heated it sublimes without any residue.

Preparation.—Tinctura Camphoræ cum Opio.

ACIDUM CITRICUM.

CITRIC ACID.

An Acid, $3\text{HO}, \text{C}_{12}\text{H}_5\text{O}_{11} + \text{HO}$, obtained from Lemon Juice, or from the juice of the fruit of *Citrus Limetta Risso*, the Lime.

Characters.—In colourless right rhombic prisms with a strongly acid taste, readily soluble in water, sparingly in rectified spirit.

Tests.—Sixty-seven grains of the crystals dissolved in water are neutralized by 100 measures of the volumetric solution of soda. It leaves no ash when burned with free access of air. Its aqueous solution is not darkened by sulphuretted hydrogen, and gives no precipitate when dropped into solution of lime, or when added in excess to a solution of acetate of potash, or of chloride of barium.

ACIDUM GALLICUM.

GALLIC ACID.

An Acid, $3\text{HO}, \text{C}_{14}\text{H}_3\text{O}_7 + 2\text{HO}$, prepared from Galls.

Characters.—In acicular prisms, sometimes white, but generally of a pale fawn-colour, very sparingly soluble in cold water,

but freely so in boiling water, rectified spirit, and ether. It gives a bluish-black precipitate with a persalt of iron.

Tests.—It leaves no residue when burned with free access of air. Its solution gives no precipitate with gelatine.

ACIDUM HYDROCHLORICUM.

HYDROCHLORIC ACID.

Synonym.—ACIDUM MURIATICUM PURUM, *Ed. Dub.*

Hydrochloric Acid gas, HCl , dissolved in water.

Characters.—A colourless and strongly acid liquid, emitting at ordinary temperatures white vapours having a pungent odour. It gives with nitrate of silver a curdy white precipitate, soluble in excess of ammonia, but not in nitric acid.

Tests.—Specific gravity 1.17. One fluid drachm of the acid requires for neutralization 60.25 measures of the volumetric solution of soda. When evaporated it leaves no residue. When diluted with four volumes of distilled water, it gives no precipitate with chloride of barium, or sulphuretted hydrogen, and does not tarnish bright copper foil when boiled with it.

Preparations.—Acidum dilutum, Acidum Nitro-hydrochloricum dilutum.

ACIDUM HYDROCYANICUM DILUTUM.

DILUTE HYDROCYANIC ACID.

Hydrocyanic Acid, HC_2N , dissolved in water, and constituting 2 per cent of the solution.

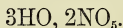
Characters.—A colourless liquid with a peculiar odour, only slightly and transiently reddening litmus. Treated with a minute quantity of a mixed solution of sulphate and persulphate of iron, and afterwards with potash, and finally acidulated with hydrochloric acid, it forms Prussian blue.

Tests.—Specific gravity 0·997. Half a fluid ounce of the acid, when treated with an excess of solution of soda, requires the addition of 80·66 measures of the volumetric solution of nitrate of silver before a permanent precipitate begins to form, which corresponds to two per cent of anhydrous acid. It gives no precipitate with chloride of barium, but with nitrate of silver it gives a white precipitate entirely soluble in boiling nitric acid.

This Acid contains rather more than half as much anhydrous acid as Acidum Hydrocyanicum, *Ed.*

ACIDUM NITRICUM.

NITRIC ACID.



Characters.—A strongly acid and corrosive yellowish liquid. When diluted with three times its volume of water and poured upon copper it gives off a colourless gas, which, upon contact with the air, becomes an orange vapour, and, when conducted into a solution of sulphate of iron, communicates to it a dark colour.

Tests.—Specific gravity 1·5. One fluid drachm of the acid requires for neutralization 121·5 measures of the volumetric solution of soda. Evaporated it leaves no residue. Diluted with six volumes of distilled water, it gives no precipitate with chloride of barium, or nitrate of silver.

Preparations.—Acidum dilutum, Acidum Nitro-hydrochloricum dilutum.

ACIDUM PHOSPHORICUM DILUTUM.

DILUTE PHOSPHORIC ACID.

Phosphoric Acid, $3\text{HO}, \text{PO}_5$, dissolved in water.

Characters.—A colourless liquid with a sour taste, and strong acid reaction. With ammonio-nitrate of silver it gives a canary-yellow precipitate soluble in ammonia, and in dilute nitric acid. Evaporated it leaves a residue, which melts at a low red heat, and upon cooling exhibits a glassy appearance.

Tests.—Specific gravity 1·08. It is not precipitated by sulphuretted hydrogen, chloride of barium, nitrate of silver acidulated with nitric acid, or by the solution of albumen. When mixed with an equal volume of pure sulphuric acid, and then introduced into the solution of sulphate of iron, it does not communicate to it a dark colour. Six fluid drachms poured upon 180 grains of litharge in fine powder, leave after evaporation a residue, which heated to dull redness weighs 215·5 grains.

ACIDUM SULPHURICUM.

SULPHURIC ACID.

Monohydrated Sulphuric Acid, HO, SO_3 .

Characters.—A colourless liquid of oily appearance, intensely acid and corrosive. It evolves much heat on the addition of water, and when thus diluted gives a copious precipitate with chloride of barium.

Tests.—Specific gravity 1·846. One fluid drachm requires for neutralization 206 measures of the volumetric solution of soda.

Evaporated in a platinum crucible it leaves no residue. When a solution of sulphate of iron is poured upon it, no purple ring is formed at the surface of the two solutions. Diluted with six times its volume of distilled water it gives no precipitate with sulphuretted hydrogen.

Preparations.—Acidum aromaticum, Acidum dilutum.

ACIDUM SULPHUROSUM.

SULPHUROUS ACID.

Sulphurous Acid, SO_2 , dissolved in water.

Characters.—A colourless liquid with a strong suffocating sulphurous odour. It gives no precipitate, or but a very slight one, with chloride of barium, but a copious one if solution of chlorine be also added.

Tests.—Specific gravity 1.04. One fluid drachm mixed with a little mucilage of starch, does not acquire a permanent blue colour with the volumetric solution of iodine until 164 measures of the latter have been added to it. When evaporated it leaves no residue.

ACIDUM TANNICUM.

TANNIC ACID.

An Acid, $\text{C}_{54}\text{H}_{22}\text{O}_{34}$, obtained from Galls.

Characters.—A pale-yellow amorphous powder, with a strongly astringent taste, and an acid reaction, readily soluble in water and rectified spirit, very sparingly in ether. Dissolved in water it precipitates a solution of gelatine yellowish-white, and the persalts of iron of a bluish-black colour.

Test.—It leaves no residue when burned with free access of air.

Preparations.—Suppositoria, Trochisci.

ACIDUM TARTARICUM.

TARTARIC ACID.

An Acid, 2HO , $\text{C}_8\text{H}_4\text{O}_{10}$, obtained from the Acid Tartrate of Potash.

Characters.—In colourless oblique rhombic prisms, of a strongly acid taste, readily soluble in water, and in rectified spirit. When to either solution a little acetate of potash is added, a white crystalline precipitate forms.

Tests.—Seventy-five grains dissolved in water require for saturation 100 measures of the volumetric solution of soda. Its aqueous solution is not affected by sulphuretted hydrogen, and gives no precipitate with the solution of sulphate of lime, or of oxalate of ammonia. It leaves no residue, or only a mere trace, when burned with free access of air.

ACONITI RADIX.

ACONITE ROOT.

Aconitum Napellus *Linn.* Plate, page 449, vol. xv.
Pharm. Journ.

The Root, dried; imported from Germany, or cultivated in Britain, and collected in the winter or early spring before the leaves have appeared.

Characters.—From one to three inches long, not thicker than the finger at the crown, tapering, wrinkled, blackish-brown, internally whitish. A minute portion, cautiously chewed, causes prolonged tingling and numbness.

Preparations.—ACONITIA, Linimentum, Tinctura.

ACONITIA.

ACONITIA.

An Alkaloid, $C_{60}H_{47}NO_{14}$, obtained from Aconite Root.

Characters.—A white usually amorphous solid, soluble in 150 parts of cold, and 50 of hot water, and much more soluble in alcohol and in ether; strongly alkaline to reddened litmus, neutralizing acids, and precipitated from them by the caustic alkalies, but not by carbonate of ammonia or the bicarbonates of soda or potash. It melts with heat, and burns with a smoky flame. When rubbed on the skin it causes tingling, followed by prolonged numbness. It is a very active poison.

Tests.—Dissolves entirely in pure ether; leaves no residue when burned with free access of air.

Preparation.—Unguentum.

ACONITUM.

ACONITE.

Aconitum Napellus *Linn.* Monkshood. Plate 6,
Woodv. Med. Bot.

The fresh Leaves and Flowering Tops; gathered, when about one third of the flowers are expanded, from plants cultivated in Britain.

Characters.—Leaves smooth, palmate, divided into five deeply cut wedge-shaped segments; exciting, when chewed, a sensation of tingling. Flowers numerous, irregular, deep blue, in spikes.

Preparation.—Extractum.

ADEPS PRÆPARATUS.

PREPARED LARD.

Synonym.—AXUNGIA, *Ed.*

Hog's Fat, deprived of its membranes, and purified by heat.

Characters.—A soft white fatty substance, melting at about 100°.

Tests.—Has no rancid odour, dissolves entirely in ether. Distilled water in which it has been boiled, when cooled and filtered, gives no precipitate with nitrate of silver.

Preparation.—Unguentum simplex.

ÆTHER.

ETHER.

Synonym.—ÆTHER SULPHURICUS, *Ed. Dub.*

Oxide of Ethyl, C_4H_5O , with about 8 per cent by volume of alcohol.

Characters.—A colourless very volatile and inflammable liquid, emitting a pungent and very characteristic odour, and boiling below 105° . A little of it poured upon the hand evaporates rapidly, producing a sensation of cold.

Tests.—Specific gravity 0.735. 50 measures agitated with an equal volume of water are reduced to 41, by an absorption of 18 per cent. It evaporates without residue.

Preparation.—Spiritus.

ÆTHERIS NITROSI SPIRITUS.

SPIRIT OF NITROUS ETHER.

Synonym.—SPIRITUS ÆTHERIS NITRICI, *Lond. Ed.*

Nitrous Ether, C_4H_5O , NO_3 , dissolved in rectified Spirit.

Characters.—Transparent and nearly colourless, with a very slight tinge of yellow, mobile, inflammable, of a peculiar penetrating apple-like odour, and sweetish cooling sharp taste. When agitated with the solution of sulphate of iron and a few drops of sulphuric acid it becomes deep olive-brown or black.

Tests.—Specific gravity 0.843. It effervesces feebly or not at all when shaken with a little bicarbonate of soda. If it is agitated with twice its volume of a saturated solution of chloride of calcium, one and a half per cent by volume of nitrous ether separates and rises to the surface.

ALOE BARBADENSIS.

BARBADOES ALOES.

Aloe vulgaris Lam. *Encycl.* Plate 109, *Steph. and Church. Med. Bot.*

The Juice of the leaf, inspissated; imported from Barbadoes.

Characters.—In yellowish-brown or dark-brown opaque masses; breaks with a dull conchoidal fracture; has a bitter nauseous taste, and a strong disagreeable odour; dissolves almost entirely in proof spirit, and during solution exhibits under the microscope numerous crystals. Usually imported in gourds.

Preparations.—Enema, Extractum, Pilula, Pilula Cambogiæ composita, Pilula Colocynthis composita, Pilula Colocynthis et Hyoscyami.

ALOE SOCOTRINA.

SOCOTRINE ALOES.

One or more undetermined species of *Aloe Linn.*

The Juice of the leaf, inspissated; usually procured from Socotra.

Characters.—In reddish-brown masses, opaque, or translucent at the edges; breaks with an irregular or smooth and resinous fracture; has a bitter taste, and a strong but fragrant odour; dissolves entirely in proof spirit, and during solution exhibits under the microscope numerous minute crystals.

Preparations.—Decoctum compositum, Enema, Extractum, Extractum Colocynthis compositum, Pilula, Pilula Aloes et Assa-fœtidæ, Pilula Aloes et Myrrhæ, Pilula Rhei composita, Tinctura, Vinum.

ALUMEN.

ALUM.

Sulphate of Alumina and Potash, $\text{Al}_2\text{O}_3, 3\text{SO}_3 + \text{KO}, \text{SO}_3 + 24\text{HO}$

Characters.—In colourless transparent crystalline masses, exhibiting the faces of the regular octahedron, and having an acid sweetish astringent taste. Its aqueous solution gives with caustic potash a white precipitate soluble in an excess of the reagent, an immediate precipitate with chloride of barium, and, after some hours, a crystalline precipitate with tartaric acid.

Tests.—Not coloured blue by a mixture of the ferrocyanide and the ferridecyanide of potassium; entirely soluble in hot solution of soda, without the evolution of ammonia.

Preparation.—Alumen exsiccatum.

AMMONIACUM.

AMMONIAC.

Dorema Ammoniacum *Don, Trans. Linn. Soc.*

A Gum-resinous Exudation from the stem; collected in Persia and the Punjaub.

Characters.—In tears or masses; the tears from two to eight lines in diameter, pale cinnamon-brown, breaking with a smooth

shining opaque white surface; the masses composed of agglutinated tears; hard and brittle when cold, but readily softening with heat; has a faint odour, and a bitter acrid nauseous taste. Rubbed with water it forms a milky emulsion.

Preparations.—Emplastrum Ammoniaci cum Hydrargyro, Emplastrum Galbani, Mistura, Pilula Scillæ composita.

AMMONIÆ ACETATIS LIQUOR.

SOLUTION OF ACETATE OF AMMONIA.

Acetate of Ammonia, NH_4O , $\text{C}_4\text{H}_3\text{O}_3$, dissolved in water.

Characters.—A transparent colourless liquid, with a saline taste. Treated with caustic potash it gives off an ammoniacal, and with sulphuric acid an acetous odour.

Tests.—Specific gravity 1.06. One fluid ounce treated with excess of hydrochloric acid, and evaporated to dryness by a water bath, leaves a residue of hydrochlorate of ammonia weighing 100 grains. It has no action on litmus, and is not rendered turbid by solution of lime. Diluted with four volumes of water, it gives no precipitate with chloride of barium or nitrate of silver.

This Solution contains about five times as much Acetate of Ammonia as Liquor Ammoniacæ Acetatis, *Lond.*, and six times as much as Liquor Ammoniacæ Acetatis, *Dub. Ed.*

AMMONIÆ BENZOAS.

BENZOATE OF AMMONIA.



Characters.—In colourless laminar crystals, soluble in water and alcohol. It gives a bulky yellow precipitate with persalts of iron. Its aqueous solution when heated with caustic potash evolves ammonia, and when acidulated with hydrochloric acid gives a deposit of benzoic acid.

Test.—When heated it sublimes without any residue.

AMMONIÆ CARBONAS.

CARBONATE OF AMMONIA.

Synonym.—AMMONIÆ SESQUICARBONAS, *Lond. Dub.*

Sesquicarbonate of Ammonia, $2\text{NH}_4\text{O}, 3\text{CO}_2$.

Characters.—In translucent crystalline masses, with a strong ammoniacal odour, and alkaline reaction; soluble in cold water, more sparingly in spirit; and readily dissolved by acids with effervescence.

Tests.—Volatilizes entirely when heated; when treated with an excess of dilute nitric acid, it gives no precipitate with chloride of barium or nitrate of silver. 50 grains are exactly neutralized by 84·74 measures of the volumetric solution of oxalic acid.

Preparation.—Spiritus Ammoniæ aromaticus.

AMMONIÆ HYDROCHLORAS.

HYDROCHLORATE OF AMMONIA.

Synonym.—AMMONIÆ MURIAS, *Ed. Dub.*



Characters.—In colourless inodorous translucent fibrous masses, tough, and difficult to powder; soluble in water and in rectified spirit. Its aqueous solution when heated with caustic potash evolves ammonia, and when treated with nitrate of silver forms a copious curdy precipitate.

Tests.—When heated it volatilizes without decomposition, and leaves no residue.

AMMONIÆ LIQUOR FORTIOR.

STRONG SOLUTION OF AMMONIA.

Ammoniacal gas, NH_3 , dissolved in water and constituting 32·5 per cent of the solution.

Characters.—A colourless liquid, with a characteristic and very pungent odour, and strong alkaline reaction.

Tests.—Specific gravity 0·891. One fluid drachm requires for neutralization 102 measures of the volumetric solution of oxalic acid. When diluted with four times its volume of distilled water, it does not give precipitates with solution of lime, oxalate or hydro-sulphuret of ammonia, or ammonio-sulphate of copper; and, when treated with an excess of nitric acid, is not rendered turbid by nitrate of silver, or by chloride of barium.

Preparations.—Linimentum Ammoniæ, Linimentum Camphoræ compositum, Liquor Ammoniæ.

AMMONIÆ PHOSPHAS.

PHOSPHATE OF AMMONIA.



Characters.—In colourless transparent prisms, which upon exposure to air lose water and ammonia and become opaque; soluble in water, insoluble in rectified spirit. It evolves ammonia when heated with caustic potash; gives a canary-yellow precipitate with nitrate of silver; and when acidulated with hydrochloric acid is not affected by sulphuretted hydrogen.

Tests.—If twenty grains of this salt be dissolved in water, and the solution of ammonio-sulphate of magnesia be added, a crystalline precipitate falls, which, when well washed upon a filter with solution of ammonia diluted with an equal volume of water, dried, and heated to redness, leaves 11·44 grains.

AMYGDALA.

JORDAN ALMONDS.

Amygdalus communis var. dulcis DC. The Sweet Almond Tree. Plate 83, *Woodv. Med. Bot.*

The Seed; from trees cultivated about Malaga.

Characters.—Above an inch in length, lanceolate, acute, with

a clear cinnamon-brown seed-coat, and a bland sweetish nutty-flavoured kernel.

Tests.—Not bitter; not evolving the odour of bitter almonds when bruised with water.

Preparations.—Mistura, Pulvis compositus.

AMYGDALÆ OLEUM. See OLEUM AMYGDALÆ.

AMYLUM.

WHEAT STARCH.

Triticum vulgare Villars, Plant. Dauph. Common Wheat.

Starch procured from the seed.

Characters.—In white columnar masses, which become blue with solution of iodine.

Preparation.—Mucilago.

ANETHI OLEUM. See OLEUM ANETHI.

ANETHUM.

DILL.

Anethum graveolens Linn. Plate 159, *Woodv. Med. Bot.*

The Fruit; cultivated in England, or imported from middle and southern Europe.

Characters.—Oval, flat, about a line and a half in length, with a pale membranous margin. Odour aromatic, taste warm, somewhat bitter.

Preparation.—Aqua.

ANISI OLEUM. See OLEUM ANISI.

ANTHEMIDIS OLEUM. See OLEUM ANTHEMIDIS.

ANTHEMIS.

CHAMOMILE FLOWERS.

Anthemis nobilis Linn. Common Chamomile. Plate 980, vol. xiv. *Engl. Bot.*

The Flower heads, single and double, dried; wild and cultivated in Britain.

Characters.—The Single variety consists of both yellow tubular, and white strap-shaped, florets; the Double of white strap-shaped florets only; all arising from a conical scaly receptacle; and both varieties, but especially the Single, are bitter and very aromatic.

Preparations.—Extractum, Infusum.

ANTIMONII OXIDUM.

OXIDE OF ANTIMONY.

Teroxide of Antimony, SbO_3 .

Characters.—A white powder, fusible at a low red heat, insoluble in water, but readily dissolved by hydrochloric acid. The solution, dropped into distilled water, gives a white deposit, at once changed to orange by sulphuretted hydrogen.

Tests.—Does not yield any sublimate when fused in a test tube; dissolves entirely when boiled with an excess of the acid tartrate of potash.

Preparation.—Pulvis Antimonialis.

ANTIMONII TERCHLORIDI LIQUOR.

SOLUTION OF TERCHLORIDE OF ANTIMONY.

Terchloride of Antimony, SbCl_3 , dissolved in hydrochloric acid.

Characters.—A heavy liquid usually of a yellowish-red colour. A little of it dropped into water gives a white precipitate, and the filtered solution lets fall a copious deposit on the addition of nitrate of silver. If the white precipitate formed by water be treated with sulphuretted hydrogen it becomes orange.

Tests.—Specific gravity 1.47. One fluid drachm mixed with a solution of a quarter of an ounce of tartaric acid in four fluid

ounces of water, forms a clear solution, which, if treated with sulphuretted hydrogen, gives an orange precipitate, weighing, when washed and dried at 212° , at least 22 grains.

ANTIMONIUM SULPHURATUM.

SULPHURATED ANTIMONY.

Synonyms.—ANTIMONII OXYSULPHURETUM, *Lond.*

ANTIMONII SULPHURETUM AUREUM, *Ed.*

ANTIMONII SULPHURETUM PRÆCIPITATUM, *Dub.*

Tersulphuret of Antimony, SbS_3 , with a small and variable amount of Teroxide of Antimony, SbO_3 .

Characters.—An orange-red powder, readily dissolved by caustic soda, also by hydrochloric acid with the evolution of sulphuretted hydrogen and the separation of a little sulphur. The acid solution dropped into water gives a copious white precipitate.

Tests.—Sixty grains of this preparation, dissolved in hydrochloric acid and dropped into water, give a white precipitate, which, when washed and dried, weighs about 53 grains.

Preparation.—Pilula Calomelanos composita.

ANTIMONIUM TARTARATUM.

TARTARATED ANTIMONY.

Synonym.—ANTIMONII POTASSIO-TARTRAS, *Lond.*

Tartrate of Antimony and Potash, SbO_3 , KO , $\text{C}_8\text{H}_4\text{O}_{10}$
+ 2HO .

Characters.—In colourless transparent crystals exhibiting triangular facets, soluble in water, and less so in proof spirit. It decrepitates and blackens upon the application of heat. Its solution in water gives with hydrochloric acid a white precipitate, which is not formed if tartaric acid be previously added.

Tests.—Twenty grains dissolve without residue in a fluid ounce of distilled water at 60° , and the solution gives with sulphuretted hydrogen an orange precipitate, which, when washed and dried at 212° , weighs 9.91 grains.

Preparations.—Unguentum, Vinum.

AQUA.

WATER.

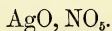
Natural Water, HO, the purest that can be obtained, cleared, if necessary, by filtration.

Tests.—Free from odour, taste, and visible impurity.

Preparation.—Aqua destillata.

ARGENTI NITRAS.

NITRATE OF SILVER.



Characters.—In colourless tabular right rhombic prisms, or in white cylindrical rods, soluble in distilled water, and in rectified spirit; gives with hydrochloric acid a curdy white precipitate, which darkens by exposure to light, and is soluble in solution of

ammonia. A small fragment heated on charcoal with the blow-pipe, first melts, and then deflagrates, leaving behind a dull white metallic coating.

Tests.—Ten grains dissolved in two fluid drachms of distilled water give with hydrochloric acid a precipitate, which, when washed and thoroughly dried, weighs 8.44 grains. The filtrate when evaporated by a water bath leaves no residue.

ARGENTI OXIDUM.

OXIDE OF SILVER.



Characters.—An olive-brown powder, which at a low red heat gives off oxygen, and is reduced to the metallic state. It dissolves completely in nitric acid without the evolution of any gas, forming a solution which has the characters of nitrate of silver.

Test.—29 grains heated to redness leave 27 grains of metallic silver.

ARMORACIA.

HORSERADISH ROOT.

Cochlearia Armoracia Linn. Plate 150, *Woodv. Med. Bot.*

The fresh Root; cultivated in Britain.

Characters.—Long, cylindrical, white, sweetish, hot, and acrid, giving off when scraped a highly pungent odour.

Preparation.—*Spiritus compositus.*

ARNICA.

ARNICA ROOT.

Arnica montana Linn. Plate 123, *Steph. and Church. Med. Bot.*

The Root, dried; collected in middle and southern Europe.

Characters.—Rootstock from one to three inches long, and two or three lines thick, cylindrical, contorted, rough from the scars of the coriaceous leaves, and furnished with numerous long slender fibres; has a peppery taste and peculiar odour.

Preparation.—Tinctura.

ASSAFOETIDA.

ASSAFOETIDA.

Narthex Assafoetida Falconer in *Royle's Mat. Med.* Plates 20, 21, vol. xxii. *Edinb. Roy. Soc. Trans.*

A Gum-resin, obtained by incision from the living root, in Affghanistan and the Punjaub.

Characters.—In irregular masses, partly composed of tears, moist or dry. The colour of a freshly cut or broken piece is opaque white, but gradually becomes purplish-pink, and ultimately dull-yellowish or pinkish-brown. Taste bitter, acrid; odour fetid, alliaceous, and persistent. It dissolves almost entirely in rectified spirit.

Preparations.—Enema, Pilula Aloes et Assafœtidæ, Pilula composita, Tinctura.

ATROPIA.

ATROPIA.

An Alkaloid, $C_{34}H_{23}NO_6$, obtained from Belladonna Root.

Characters.—In colourless acicular crystals, sparingly soluble in water, more readily in alcohol and in ether. Its solution in water has an alkaline reaction, gives a citron-yellow precipitate with terchloride of gold, has a bitter taste, and powerfully dilates the pupil. It is an active poison.

Tests.—Dissolves entirely in pure ether; leaves no ash when burned with free access of air.

Preparations.—Liquor, Unguentum.

AURANTII AQUA.

ORANGE-FLOWER WATER.

Citrus Bigaradia *Risso*, *Hist. Nat. des Orang.* plate 30, The Bitter-Orange tree; and Citrus Aurantium *Risso*, plates 3, 4, The Sweet-Orange tree.

The Distilled Water of the flowers; prepared mostly in France.

Characters.—Nearly colourless, fragrant.

Test.—Not coloured by sulphuretted hydrogen.

Preparation.—Syrupus Aurantii Floris.

AURANTII CORTEX.

BITTER-ORANGE PEEL.

Citrus Bigaradia *Risso, Hist. Nat. des Orang.* plate 30.

The outer part of the Rind, dried; from the ripe fruit imported from the south of Europe.

Characters.—Thin, of a dark orange colour, nearly free from the white inner part of the rind; having an aromatic bitter taste, and fragrant odour.

Preparations.—Infusum, Syrupus, Tinctura.

BALSAMUM CANADENSE. See TEREBINTHINA
CANADENSIS.

BALSAMUM PERUVIANUM.

BALSAM OF PERU.

Myrospermum Pereiræ Royle, Mat. Med. Plate, *Pharm. Journ.* vol. x. page 282.

A Balsam, obtained from the stem by incision; from Salvador in Guatemala.

Characters.—A reddish-brown or nearly black liquid, translucent in thin films; having the consistence of treacle, a balsamic odour, and an acrid slightly bitter taste; soluble in five parts of rectified spirit.

Test.—Undergoes no diminution in volume when mixed with water.

BALSAMUM TOLUTANUM.

BALSAM OF TOLU.

Myrospermum toluiferum DC.

A Balsam, obtained from the stem by incision ; from the mountains of Tolu in New Granada.

Characters.—A soft and tenacious solid, with a fragrant balsamic odour ; soluble in rectified spirit.

Preparations.—Syrupus, Tinctura, Tinctura Benzoini composita.

BEBERIÆ SULPHAS.

SULPHATE OF BEBERIA.

The Sulphate of an Alkaloid, $C_{38}H_{21}NO_6$, HO, SO_3 , prepared from Bebeeru Bark.

Characters.—In dark-brown thin translucent scales, yellow when in powder, with a strong bitter taste, soluble in water and in alcohol. Its watery solution gives a white precipitate with chloride of barium ; and with caustic soda a yellowish-white precipitate, which is dissolved by agitating the mixture with twice its volume of ether. The ethereal solution, separated by a pipette and evaporated, leaves a yellow translucent residue, entirely soluble in dilute acids.

Tests.—Entirely destructible by heat. Water forms with it a clear brown solution.

BELA.

BAEL.

Ægle Marmelos DC. Plate, *Pharm. Journ.* vol. x. page 166.

The half-ripe Fruit, dried ; from Malabar and Coromandel.

Characters.—Fruit roundish, about the size of a large orange, with a hard woody rind ; usually imported in dried slices, or in fragments consisting of portions of the rind and adherent dried pulp and seeds. Rind about a line and a half thick, covered with a smooth pale-brown or greyish epidermis, and internally, as well as the dried pulp, brownish-orange, or cherry-red. The moistened pulp is mucilaginous.

Preparation.—Extractum liquidum.

BELLADONNA.

BELLADONNA.

Atropa Belladonna Linn. Deadly Nightshade. Plate 16, fasc. 5, *Flor. Lond.*

The Leaves, fresh and dried, and the fresh Branches ; gathered, when the fruit has begun to form, from wild or cultivated plants in Britain.

Characters.—Leaves alternate, three to six inches long, ovate, acute, entire, smooth, the uppermost in pairs and unequal. The

expressed juice, or an infusion, dropped into the eye, dilates the pupil.

Preparations.—Emplastrum, Extractum, Tinctura, Unguentum.

BELLADONNÆ RADIX.

BELLADONNA ROOT.

Atropa Belladonna Linn.

The Root, dried ; imported from Germany.

Characters.—From one to two feet long, and from half an inch to two inches thick, branched and wrinkled, brownish-white. An infusion dropped into the eye dilates the pupil.

Preparations.—ATROPIA, Linimentum.

BENZOINUM.

BENZOIN.

Styrax Benzoin DC. Plate 12, vol. lxxvii. *Phil. Trans.*

A Resinous Exudation from the stem ; imported from Siam and Sumatra.

Characters.—In lumps, consisting of agglutinated tears, or of a brownish mottled mass with or without white tears imbedded in it ; has little taste, but an agreeable odour ; gives off, when heated, fumes of benzoic acid ; and is soluble in rectified spirit and in solution of potash.

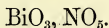
Preparations.—ACIDUM BENZOICUM, Tinctura composita.

BISMUTHUM ALBUM.

WHITE BISMUTH.

Synonyms.—BISMUTHI NITRAS, *Lond.*

BISMUTHI SUBNITRAS, *Dub.*



Characters.—A heavy white powder in minute crystalline scales, blackened by sulphuretted hydrogen, insoluble in water, but forming with nitric acid a solution which poured into water gives a white crystalline precipitate, and with sulphuric acid diluted with an equal bulk of water a solution which is blackened by sulphate of iron.

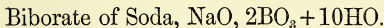
Tests.—Dissolves in nitric acid without effervescence. The solution gives no precipitate with dilute sulphuric acid.

Preparation.—Trochisci.

BORAX.

BORAX.

Synonym.—SODÆ BIBORAS, *Dub.*



Characters.—In transparent colourless crystals, sometimes slightly effloresced, with a weak alkaline reaction; insoluble in rectified spirit, soluble in water. A hot saturated solution, when acidulated with any of the mineral acids, lets fall, as it cools, a scaly crystalline deposit, the solution of which in spirit burns with a green flame.

Test.—191 grains dissolved in 10 fluid ounces of distilled water require for saturation 100 measures of the volumetric solution of oxalic acid.

Preparation.—Mel.

BUCCO.

BUCHU.

1. *Barosma betulina* *Bartling and Wendland*. Plate 404, vol. v. *Lodd. Cab. (Diosma crenata)*.
2. *Barosma crenulata* *Willd. Enum. Sup.* Plate 3413, vol. lxii. *Bot. Mag.*
3. *Barosma serratifolia* *Willd. Enum.* Plate 456, vol. xiii. *Bot. Mag. (Diosma serratifolia)*.

The dried Leaves; imported from the Cape of Good Hope.

Characters.—Smooth, marked with pellucid dots at the indentations and apex; having a powerful odour and a warm camphoraceous taste. 1. About three quarters of an inch long, coriaceous, obovate, with a recurved truncated apex and sharp cartilaginous spreading teeth. 2. About an inch long, oval-lanceolate, obtuse, minutely crenated, five-nerved. 3. From an inch to an inch and a half long, linear-lanceolate, tapering at each end, sharply and finely serrated, three-nerved.

Preparations.—Infusum, Tinctura.

CAJUPUTI. See OLEUM CAJUPUTI.

CALCIS CARBONAS PRÆCIPITATA.

PRECIPITATED CARBONATE OF LIME.

CaO , CO_2 .

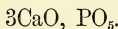
Characters.—A white crystalline powder, insoluble in water, dissolving in hydrochloric acid with effervescence. The solution, when neutralized by ammonia, on the addition of oxalate of ammonia lets fall a copious white precipitate.

Tests.—With dilute nitric acid it gives a clear solution, which, if perfectly neutral, is not precipitated by saccharated solution of lime added in excess, or by the solution of nitrate of silver.

Preparation.—Mistura Cretæ.

CALCIS PHOSPHAS PRÆCIPITATA.

PRECIPITATED PHOSPHATE OF LIME.



Characters.—A light white amorphous powder, insoluble in water, but soluble without effervescence in dilute nitric acid. The solution continues clear when an excess of acetate of soda is added to it, but lets fall a white precipitate on the addition both of a little oxalate of ammonia, and of perchloride of iron.

Tests.—Ten grains dissolve perfectly and without effervescence in dilute hydrochloric acid. The solution yields with ammonia a white precipitate, which is insoluble in boiling solution of potash, and when washed and dried weighs ten grains.

Preparation.—Pulvis Antimonialis.

CALOMELAS.

CALOMEL.

Subchloride of Mercury, Hg_2Cl .

Characters.—A dull-white heavy and nearly tasteless powder, rendered yellowish by trituration in a mortar; insoluble in water,

spirit, or ether. Digested with solution of potash, it becomes black; and the clear solution, acidulated with nitric acid, gives a copious white precipitate with nitrate of silver.

Tests.—Entirely volatilized by a sufficient heat. Warm ether which has been shaken with it in a bottle leaves, on evaporation, no residue.

Preparations.—Pilula composita, Unguentum.

CALUMBA.

CALUMBO.

Cocculus palmatus DC. Plate 60, *Steph. and Church. Med. Bot.*

The Root, sliced transversely, and dried; from Mozambique.

Characters.—Slices flat, circular, or oval, about two inches in diameter, and from two to four lines thick, softer and thinner towards the centre, greyish-yellow, bitter. A decoction, when cold, is blackened by the solution of iodine.

Preparations.—Extractum, Infusum, Tinctura.

CALX.

LIME.

CaO.

Characters.—In light lumps, externally of a dirty white colour, white within. When two thirds of its weight of water are poured

upon it, it slakes rapidly, with the developement of much heat, and is converted into a snow-white and very bulky powder. This, when agitated with distilled water, gives after filtration a clear solution, which has an alkaline reaction, and yields a white precipitate with oxalate of ammonia.

Tests.—If previously slaked it dissolves without effervescence in dilute hydrochloric acid, and if this solution be evaporated to dryness, and the residue redissolved in water, only a very scanty precipitate forms on the addition of saccharated solution of lime.

Preparations.—Hydras, Linimentum, Liquor, Liquor saccharatus.

CALX CHLORATA.

CHLORINATED LIME.

Hypochlorite of Lime, CaO , ClO , with Chloride of Calcium, and a variable amount of Hydrate of Lime.

Characters.—A dull-white powder with a feeble odour of chlorine, partially soluble in water. The solution evolves chlorine copiously upon the addition of oxalic acid, and deposits at the same time oxalate of lime.

Tests.—Ten grains mixed with thirty grains of iodide of potassium, and dissolved in four fluid ounces of water, produce, when acidulated with two fluid drachms of hydrochloric acid, a reddish solution, which requires for the discharge of its colour at least 85 measures of the volumetric solution of hyposulphite of soda.

Preparation.—Liquor.

CAMBOGIA.

GAMBOGE.

An undetermined species of *Garcinia Linn.*

The Gum-resin ; imported from Siam.

Characters.—In cylindrical pieces, breaking easily with a smooth conchoidal glistening fracture ; colour tawny, changing to yellow when it is rubbed with water ; taste acrid.

Test.—An emulsion made with boiling water, and cooled, does not become green with the solution of iodine.

Preparation.—*Pilula composita.*

CAMPHORA.

CAMPHOR.

Camphora officinarum Nees, Laurineæ. Plate 155, *Woodv. Med. Bot. (Laurus Camphora).*

A concrete volatile Oil, obtained from the wood by sublimation, and resublimed in bell-shaped masses ; imported from China.

Characters.—White, translucent, tough, and crystalline ; has a powerful penetrating odour, and a pungent taste followed by a sensation of cold ; floats on water ; volatilizes slowly at ordinary temperatures ; is slightly soluble in water, but readily soluble in rectified spirit and in ether.

Test.—Sublimes entirely when heated.

Preparations.—Aqua, Linimentum, Linimentum compositum, Linimentum Saponis, Spiritus, Tinctura Camphoræ cum Opio.

CANNABIS INDICA.

INDIAN HEMP.

Cannabis sativa *Linn.* Hemp. Plate 61, vol. x.
Rheede, Hort. Malab.

The Flowering Tops of the female plant from which the resin has not been removed, dried; cultivated in India.

Characters.—Tops consisting of one or more alternate branches, bearing the remains of the flowers and smaller leaves and a few ripe fruits, pressed together in masses which are about two inches long, harsh, of a dusky-green colour and a characteristic odour.

Preparations.—Extractum, Tinctura.

CANTHARIS.

CANTHARIDES.

Cantharis vesicatoria *De Geer, Hist. des Insectes.*

The Beetle, dried; collected in Russia, Sicily, and Hungary.

Characters.—From eight to ten lines long, furnished with two wing-covers of a shining metallic-green colour, under which are two membranous transparent wings; odour strong and disagreeable; powder greyish-brown, containing shining green particles.

Test.—Free from mites.

Preparations.—Emplastrum, Emplastrum calefaciens, Linimentum, Tinctura, Unguentum.

CAPSICUM.

CAPSICUM.

Capsicum fastigiatum *Blume, Bijdr.* Plate 1617, vol. iv. *Wight, Icones Plant. Ind. Orient.*

The ripe Fruit, dried; imported from the coast of Guinea and from the East and West Indies, and distinguished in commerce as Guinea Pepper and Pod Pepper.

Characters.—Pod membranous, from five to eight lines long, two lines broad, straight, conical, pointed, smooth, shining, but somewhat corrugated, orange-red, intensely hot in taste.

Preparation.—Tinctura.

CARBO ANIMALIS PURIFICATUS.

PURIFIED ANIMAL CHARCOAL.

Bone Black deprived of its earthy salts.

Characters.—A black pulverulent substance. If it is perfectly dry, the tincture of litmus diluted with twenty times its bulk of water, agitated with it and thrown upon a filter, passes through colourless.

Test.—When burned at a high temperature with free access of air, it leaves scarcely any residue.

CARBO LIGNI.

WOOD CHARCOAL.

Wood charred by exposure to a red heat without access of air.

Characters.—In black brittle porous masses, without taste or smell, very light, and retaining the shape and texture of the wood from which it was obtained; insoluble in water, and in close vessels neither melted nor volatilized by the most intense heat.

Test.—When burned at a high temperature with free access of air, it leaves not more than two per cent of ash.

Preparation.—Cataplasma.

CARDAMOMUM.

CARDAMOMS.

Elettaria Cardamomum *Maton, Trans. Linn. Soc.* vol. x. plates 4, 5. The Malabar Cardamom.

The Seeds, contained in their capsules, which are to be removed when the seeds are employed; cultivated in Malabar.

Characters.—Seeds obtusely angular, corrugated, reddish-brown, internally white, with a warm aromatic agreeable taste and odour, contained in ovate-oblong triangular pale-brown coriaceous ribbed capsules.

Preparations.—*Pulvis aromaticus, Tinctura composita.*

CARUI.

CARAWAY.

Carum Carui *Linn.* Plate 45, *Woodv. Med. Bot.*

The Fruit, dried ; cultivated in England and Germany.

Characters.—Fruit usually separating into two parts which are about two lines long, curved, tapering at each end, brown, with five paler longitudinal ridges ; having an agreeable aromatic odour, and a spicy taste.

Preparation.—Aqua.

CARUI OLEUM. See OLEUM CARUI.

CARYOPHYLLI OLEUM. See OLEUM CARYOPHYLLI.

CARYOPHYLLUM.

CLOVES.

Caryophyllus aromaticus *Linn.* Plates 2749, 2750, vol. liv. *Bot. Mag.*

The unexpanded Flower-bud, dried ; cultivated in Penang, Bencoolen, and Amboyna.

Characters.—About six lines long, dark reddish-brown, plump, heavy and entire, consisting of a nearly cylindrical body surmounted by four teeth and a globular head, with a strong fragrant odour, and a bitter spicy pungent taste.

Test.—It emits oil when indented with the nail.

Preparations.—Infusum, Pulvis Aromaticus.

CASCARILLA.

CASCARILLA.

Croton Eluteria *Bennett, Journ. Proceed. Linn. Soc. Plate, p. 150. vol. iv. Pharm. Journ. 2nd ser.*

The Bark ; from the Bahama Islands.

Characters.—In quills, two or three inches in length, and from two to five lines in diameter, dull brown but more or less coated with white crustaceous lichens ; breaks with a short resinous fracture ; is warm and bitter to the taste ; and emits a fragrant odour when burned.

Preparations.—Infusum, Tinctura.

CASSIA.

CASSIA PULP.

Cassia Fistula *Linn. Purging Cassia. Plate 163, Woodv. Med. Bot.*

The Pulp of the pods ; imported from the East

Indies ; or recently extracted from pods imported from the East or West Indies.

Characters.—Blackish-brown, viscid, sweet in taste, and somewhat sickly in odour ; usually containing the seeds and dissepiments.

Preparation.—Confectio Sennæ.

CASTOREUM.

CASTOR.

Castor Fiber *Linn.* The Beaver.

The Preputial Follicles and their Secretion, dried, separated from the somewhat shorter and smaller oil-sacs which are frequently attached to them ; from the Hudson's Bay Territory.

Characters.—Follicles in pairs, about three inches long, fig-shaped, firm, and heavy, brown or greyish-black ; containing a dry resinous reddish-brown or brown highly odorous secretion, in great part soluble in rectified spirit, and in ether.

Preparation.—Tinctura.

CATECHU NIGRUM.

BLACK CATECHU.

Acacia Catechu *Willd. Enum.* Plate 66, *Woodv. Med. Bot.* (*Mimosa Catechu*).

An Extract of the heart-wood ; imported from Pegu.

Characters.—In masses, consisting of layers enveloped in rough leaves, blackish-brown, shining, heavy, bitter and very astringent.

Preparations.—Infusum, Pulvis compositus, Tinctura.

CATECHU PALLIDUM.

PALE CATECHU.

Uncaria Gambir *Roxburgh, Flor. Ind.* Plate 22, vol. ix.
Trans. Linn. Soc. (Nauclea Gambir).

An Extract of the leaves and young shoots ; prepared at Singapore and in the Eastern Archipelago.

Characters.—In cubes, or masses formed of coherent cubes ; the former about an inch in diameter, externally brown, internally ochrey-yellow or pale brick-red, breaking easily with a dull earthy fracture. Taste bitter, very astringent, and mucilaginous, succeeded by slight sweetness.

Tests.—Entirely soluble in boiling water. The decoction when cool is not rendered blue by iodine.

Preparations.—Infusum, Pulvis compositus, Tinctura, Trochisci.

CERA ALBA.

WHITE WAX.

Yellow Wax, bleached by exposure to moisture, air, and light ; British and imported.

Characters.—Hard, nearly white, translucent.

Tests.—Not unctuous to the touch; does not melt under 150°.

Preparation.—Unguentum simplex.

CERA FLAVA.

YELLOW WAX.

Apis mellifica Linn. The Hive Bee.

The prepared Honeycomb; British and imported.

Characters.—Firm, breaking with a granular fracture, yellow, having an agreeable honey-like odour.

Tests.—Not unctuous to the touch; does not melt under 140°; yields nothing to cold rectified spirit, but is entirely soluble in oil of turpentine. Boiling water in which it has been agitated, when cooled, is not rendered blue by iodine.

CEREVISIÆ FERMENTUM.

BEER YEAST.

The Ferment, obtained in brewing beer.

Characters.—Viscid, semifluid, frothy, exhibiting under the microscope numerous round or oval confervoid cells.

Preparation.—Cataplasma.

CETACEUM.

SPERMACETI.

Physeter macrocephalus *Linn.* The Sperm Whale, inhabiting the Pacific and Indian Oceans.

Nearly pure Cetine, separated by cooling and purification from the oil contained in the head.

Characters.—Crystalline, pearly-white, glistening, translucent, with little taste or odour, reducible to powder by the addition of a little rectified spirit.

Tests.—Scarcely unctuous to the touch; does not melt under 100°.

Preparation.—Unguentum.

CETRARIA.

ICELAND MOSS.

Cetraria islandica *Acharius*, *Lichenogr.* Plate 205, *Woodv. Med. Bot.* (*Lichen islandicus*).

The entire Lichen; native of the North of Europe.

Characters.—Foliaceous, lobed, crisp, cartilaginous, brownish-white, paler beneath, bitter, and mucilaginous. A strong decoction gelatinizes on cooling.

Preparation.—Decoctum.

CHIRATA.

CHIRETTA.

Ophelia Chirata DC. Plate 252, vol. iii. *Wallich, Plant. Asiat. (Gentiana Chirata)*.

The entire Plant; collected in northern India when the fruit begins to form.

Characters.—Stems about three feet long, of the thickness of a goose-quill, round, smooth, pale brown, branched; branches opposite; flowers small, numerous, panicled; the whole plant intensely bitter.

Preparations.—Infusum, Tinctura.

CHLORI LIQUOR.

SOLUTION OF CHLORINE.

Chlorine gas dissolved in half its volume of water, and constituting 0.006 of the weight of the solution.

Characters.—A yellowish-green liquid, smelling strongly of chlorine, and immediately discharging the colour of a dilute solution of sulphate of indigo.

Tests.—Specific gravity 1.003. Evaporated it leaves no residue. When twenty grains of iodide of potassium dissolved in an ounce of distilled water are added to a fluid ounce of this preparation, the mixed solution acquires a deep red colour, which requires for its discharge seventy-five measures of the volumetric solution of hyposulphite of soda.

CHLOROFORMUM.

CHLOROFORM.



Characters.—A limpid colourless liquid, of an agreeable ethereal odour, and sweet taste. Mixes with alcohol and ether in all proportions; and dissolves slightly in water, communicating to it a sweetish taste. Burns, though not readily, with a green and smoky flame.

Tests.—Specific gravity 1.496. Is not coloured by agitation with sulphuric acid, leaves no residue and no unpleasant odour after evaporation, and evolves no gas when potassium is dropped into it.

Preparations.—Linimentum, Spiritus.

CINCHONA FLAVA.

YELLOW-CINCHONA BARK.

Cinchona Calisaya Weddell, Hist. Nat. des Quinquinas, Plates 2, 3 bis, and 28.

The Bark; collected in Bolivia and southern Peru.

Characters.—In flat pieces, uncoated or deprived of the periderm, rarely in coated quills, from six to eighteen inches long, one to three inches wide, and two to four lines thick, compact and heavy; outer surface brown, marked by broad shallow irregular longitudinal depressions; inner surface tawny-yellow, fibrous; transverse fracture shortly and finely fibrous. Powder cinnamon-brown, somewhat aromatic, persistently bitter.

Test.—Boil 100 grains of the bark, reduced to very fine powder, for a quarter of an hour in a fluid ounce of distilled water acidulated with ten minims of hydrochloric acid; and allow it to macerate for twenty-four hours. Transfer the whole to a small displacement tube, and after the fluid has ceased to percolate add at intervals about an ounce and a half of similarly acidulated water, or add until the fluid which passes through is free from colour. Add to the percolated fluid solution of subacetate of lead, until the whole of the colouring matter has been removed, taking care that the fluid remains acid in reaction. Filter and wash with a little distilled water. To the filtrate add about thirty-five grains of caustic potash, or as much as will cause the precipitate which is at first formed to be nearly redissolved, and afterwards six fluid drachms of pure ether. Then shake briskly, and, having removed the ether, repeat the process twice with three fluid drachms of ether, or until a drop of the ether employed leaves on evaporation scarcely any perceptible residue. Lastly, evaporate the mixed ethereal solutions in a capsule. The residue, which consists of nearly pure Quinia, when dry, should weigh not less than 2 grains, and should be readily soluble in dilute sulphuric acid.

Preparations.—QUINIE SULPHAS, Decoctum, Extractum liquidum, Infusum, Tinctura.

CINCHONA PALLIDA.

PALE-CINCHONA BARK.

Cinchona Condaminea DC. vars. chahuarguera Pavon, and crispa Tafalla. Plates 1 and 2, *Howard's Illustrations (Cinchona chahuarguera and C. crispa).*

The Bark; collected about Loxa in Ecuador.

Characters.—From half a line to a line thick, in single or double

quills, which are from six to fifteen inches long, two to eight lines in diameter, brittle, easily splitting longitudinally, and breaking with a short transverse fracture; outer surface brown and wrinkled, or grey and speckled with adherent lichens, with or without numerous transverse cracks; inner surface bright orange or cinnamon-brown: powder pale brown, slightly bitter, very astringent.

Test.—200 grains of the bark, treated in the manner directed in the test for yellow cinchona bark, with the substitution of chloroform for ether, should yield not less than 2 grains of alkaloids.

Preparation.—Tinctura composita.

CINCHONA RUBRA.

RED-CINCHONA BARK.

Cinchona succirubra Pavon MS. Nueva Quinologia.
Plate 9, *Howard's Illustrations.*

The Bark; collected on the western slopes of Chimborazo.

Characters.—In flat or incurved pieces, less frequently in quills, coated with the periderm, varying in length from a few inches to two feet, from one to three inches wide, and two to six lines thick, compact and heavy; outer surface brown or reddish-brown, rarely white from adherent lichens, rugged or wrinkled longitudinally, frequently warty, and crossed by deep transverse cracks; inner surface redder; fractured surface often approaching to brick-red; transverse fracture finely fibrous; powder red-brown; taste bitter and astringent.

Test.—100 grains of the bark, treated in the manner directed in the test for yellow cinchona bark, with the substitution of chloroform for ether, should yield not less than 2 grains of alkaloids.

CINNAMOMI OLEUM. See OLEUM CINNAMOMI.

CINNAMOMUM.

CINNAMON.

Cinnamomum zeylanicum Nees, *Laurineæ*. Plate 123, *Wight, Icon. Plant. Ind. Orient.*

The inner Bark of shoots from the truncated stock; imported from Ceylon, and distinguished in commerce as Ceylon Cinnamon.

Characters.—About one fifth of a line thick, in closely rolled quills, which are about four lines in diameter, containing several small quills within them, light yellowish-brown, with a fragrant odour and warm sweet aromatic taste: breaks with a splintery fracture.

Preparations.—Aqua, Pulvis Aromaticus, Tinctura, Tinctura Lavandulæ composita.

COCCULUS.

COCCULUS INDICUS.

Anamirta Coccus *Wight and Arnott, Flor. Penins. Ind. Orient.* Plates 15, 16, vol. xiii. *Wallich, Asiat. Res. (Menispermum Coccus)*.

The Fruit, dried; produced in Malabar and the Eastern Archipelago.

Characters.—Somewhat larger than a full-sized pea, slightly ovate, blackish-brown, wrinkled, containing a yellowish oily bitter reniform seed, inclosed in a two-valved shell.

Test.—The seed should fill at least two thirds of the shell.

Preparation.—Unguentum.

COCCUS.

COCHINEAL.

Coccus Cacti *Linn.*

The female Insect, dried; reared in Mexico and Teneriffe.

Characters.—Ovate, plano-convex, about two lines long, wrinkled, black or greyish-white; yields, when crushed, a puce-coloured powder. The greyish-white insect quickly becomes black when warmed before the fire.

Preparation.—Tinctura.

COLCHICI CORMUS.

COLCHICUM CORM.

Colchicum autumnale *Linn.* Plate 177, *Woodv. Med. Bot.* Indigenous.

The fresh Corm ; collected about the end of June ; and the same stripped of its coats, sliced transversely, and dried at a temperature not exceeding 150°.

Characters.—Fresh corm about the size of a chestnut, flattened on one side where it has an undeveloped bud ; furnished with an outer brown and an inner yellow coat ; internally white ; solid and fleshy ; yielding when cut a milky acrid and bitter juice. Dried slices about a line thick, moderately indented on one side, rarely on both, firm, flat, whitish, amylaceous.

Preparations.—Extractum, Extractum aceticum, Vinum.

COLCHICI SEMEN.

COLCHICUM SEED.

Colchicum autumnale *Linn.*

The Seed, fully ripe.

Characters.—About the size of black mustard seed, very hard, reddish-brown.

Preparation.—Tinctura.

COLLODIUM.

COLLODION.

Pyroxylin, $C_{36} \left. \begin{matrix} H_{22} \\ 8NO_4 \end{matrix} \right\} O_{30}$, dissolved in Ether mixed with one third of its volume of rectified Spirit.

Characters.—A colourless highly inflammable liquid with ethereal odour, which dries rapidly upon exposure to the air, and leaves a thin transparent film, insoluble in water or rectified spirit.

COLOCYNTHIS.

COLOCYNTH.

Citrullus Colocynthis *Schrad.* Plate 175, *Woodv. Med. Bot.* (*Cucumis Colocynthis*).

The dried decorticated Fruit, freed from the seeds; imported chiefly from Smyrna, Trieste, France, and Spain.

Characters.—Light spongy, white or yellowish-white, intensely bitter.

Preparations.—Extractum compositum, Pilula Colocynthis et Hyoscyami, Pilula composita.

CONII FRUCTUS.

HEMLOCK FRUIT.

Conium maculatum *Linn.* Spotted Hemlock. Plate 17, fasc. 1, *Flor. Lond.*

The ripe Fruit, dried.

Characters.—Broadly ovate, compressed laterally; half-fruit with five waved or crenated ridges.

Preparation.—Tinctura.

CONIUM.

HEMLOCK.

Conium maculatum Linn.

The fresh Leaves and Branches of wild British plants, gathered when the fruit begins to form; and the Leaves dried in the sun or at a temperature not exceeding 120°.

Characters.—Fresh leaves tripinnate, smooth, arising from a smooth stem with dark purple spots; dried leaves of a full green colour and characteristic odour. The leaf rubbed with caustic potash gives out strongly the odour of conia.

Preparations.—Cataplasma, Extractum, Succus.

COPAIBA.

COPAIVA.

Copaifera multijuga Hayne, Darstellung; and other species of *Copaifera*.

The Oleo-resin, obtained from the trunk by incision; chiefly from the province of Para in Brazil.

Characters.—About the consistence of olive oil, clear, light yellow, with a peculiar odour, and an acrid aromatic taste.

Tests.—Perfectly soluble in rectified spirit. Dissolves one fourth of its weight of carbonate of magnesia by the aid of heat, and remains transparent.

COPAIBÆ OLEUM. See OLEUM COPAIBÆ.

CORLANDRI OLEUM. See OLEUM CORLANDRI.

CORLANDRUM.

CORIANDER.

Coriandrum sativum Linn. Plate 181, *Woodv. Med. Bot.*

The ripe Fruit, dried ; cultivated in Britain.

Characters.—Globular, nearly as large as white pepper, beaked, finely ribbed, yellowish-brown ; has an agreeable aromatic odour and flavour.

CREASOTUM.

CREASOTE.

A product of the distillation of Wood Tar.

Characters.—A colourless liquid, with a strong empyreumatic odour, sparingly dissolved by water, but freely by alcohol, ether, and acetic acid. Coagulates albumen.

Tests.—Specific gravity 1·065. A slip of deal dipped into it, and afterwards into hydrochloric acid, and then allowed to dry in the air, acquires a greenish-blue colour. Dropped on white filtering paper and exposed to a heat of 212° it leaves no translucent stain.

Preparations.—Mistura, Unguentum.

CRETA PRÆPARATA.

PREPARED CHALK.

Carbonate of Lime, CaO , CO_2 , nearly pure.

Characters.—A white amorphous powder, effervescing with acids, and dissolving perfectly, or with a mere trace of residue, in dilute hydrochloric acid. This solution, when supersaturated with solution of ammonia, gives, upon the addition of oxalate of ammonia, a copious white precipitate.

Test.—The salt formed by dissolving the chalk in hydrochloric acid, if rendered neutral by evaporation to dryness and redissolved in water, gives only a very scanty precipitate on the addition of saccharated solution of lime.

Preparations.—Hydrargyrum cum Creta, Mistura, Pulvis Cretæ aromaticus.

CROCUS.

SAFFRON.

Crocus sativus Linn. Plate 101, *Steph. and Church. Med. Bot.*

The Stigma, and part of the Style, dried ; imported from Spain, France, and Naples.

Characters.—Consists of a thread-like style, terminated by three long orange-brown stigmas, which are broadest at their summit ; has a powerful aromatic odour. When rubbed on the moistened finger, it tinges it intensely orange-yellow.

Test.—When pressed between folds of white filtering paper, it leaves no oily stain.

Preparations.—Pulvis aromaticus, Tinctura.

CROTONIS OLEUM. See OLEUM CROTONIS.

CUBEBA.

CUBEBS.

Cubeba officinalis Miquel, Comment. Plate 175, Steph. and Church. Med. Bot.

The unripe Fruit, dried; cultivated in Java.

Characters.—The size of black pepper, globular, wrinkled, blackish, supported on a stalk of rather more than its own length; has a warm camphoraceous taste and characteristic odour.

CUBEBAE OLEUM. See OLEUM CUBEBAE.

CUPRI SULPHAS.

SULPHATE OF COPPER.

$\text{CuO}, \text{SO}_3 + 5\text{HO}.$

Characters.—In oblique prismatic crystals, of a clear blue colour, soluble in water, and reddening litmus. Its solution gives with chloride of barium a white precipitate insoluble in hydrochloric acid, and a maroon-red precipitate with ferrocyanide of potassium.

Test.—An aqueous solution of the salt to which twice its volume of solution of chlorine has been added, when treated with an excess of solution of ammonia, gives a sapphire-blue solution, leaving nothing undissolved.

CUSPARIA.

CUSPARIA BARK.

Galipea Cusparia *DC.* Plate 149, *Steph. and Church. Med. Bot. (Bonplandia trifoliata).*

The Bark; from tropical South America.

Characters.—In straight pieces more or less incurved at the sides, from half a line to a line in thickness, pared away at the edges; epidermis mottled, brown or yellowish-grey; inner surface yellowish-brown, flaky; breaks with a short fracture; bitter and slightly aromatic. The cut surface examined with a lens usually exhibits numerous white points or minute lines.

Test.—The inner surface touched with nitric acid does not become blood-red.

Preparation.—Infusum.

CUSSO.

Kousso.

Brayera anthelmintica *DC.* Plate 10, vol. ii. *Hooker's Journ. Bot.*, 3rd ser.

The Flowers; collected in Abyssinia.

Characters.—Flowers small, reddish-brown, on hairy stalks, outer limb of calyx five-parted, the segments ovate reticulated.

Preparation.—Infusum.

DIGITALINUM.

DIGITALIN.

The active principle obtained from *Digitalis*.

Characters.—In porous mammillated masses or small scales, white, inodorous, and intensely bitter; readily soluble in spirit, but almost insoluble in water and in ether; dissolves in acids, but does not form with them neutral compounds; its solution in hydrochloric acid is of a faint yellow colour, but rapidly becomes green. It powerfully irritates the nostrils, and is an active poison.

Test.—Leaves no residue when burned with free access of air.

DIGITALIS.

DIGITALIS.

Digitalis purpurea Linn. Purple Foxglove. Plate 48, fasc. 1, *Flor. Lond.*

The dried Leaf; from wild indigenous plants, gathered when about two thirds of the flowers are expanded.

Characters.—Ovate-lanceolate, shortly petiolate, rugose, downy, paler on the under surface, crenate.

Preparations.—DIGITALINUM, Infusum, Tinctura.

DULCAMARA.

DULCAMARA.

Solanum Dulcamara *Linn.* Bitter-sweet. Plate 14, fasc. 1, *Flor. Lond.*

The young Branches, dried; from indigenous plants which have shed their leaves.

Characters.—Light, hollow, cylindrical, about the thickness of a goose-quill, bitter and subsequently sweetish to the taste.

Preparation.—Infusum.

ELATERIUM.

ELATERIUM.

Synonym.—EXTRACTUM ELATERII, *Lond.*

Ecbalium officinarum *Richard.* Squirting Cucumber. Plate 34, *Steph. and Church. Med. Bot.*

A Sediment from the expressed juice of the fruit.

Characters.—In light friable slightly incurved cakes, about one line thick, greenish-grey, acrid and bitter; fracture finely granular.

Tests.—Does not effervesce with acids; yields half its weight to boiling rectified spirit. This solution concentrated and added to warm solution of potash, yields on cooling not less than twenty per cent. of elaterine in colourless crystals.

ELEMI.

ELEMI.

Botanical source undetermined, probably from *Canarium commune* *Linn.* Plate 47, vol. ii. *Rumph. Amb.*

A concrete Resinous Exudation ; chiefly imported from Manilla.

Characters. — A soft unctuous adhesive mass, becoming harder and more resinous by age ; of a yellowish-white colour, with a rather fragrant fennel-like odour ; almost entirely soluble in rectified spirit.

Preparation.—Unguentum.

ERGOTA.

ERGOT.

Secale cereale *Linn.* Common Rye.

The Grain diseased by the presence of an imperfect fungus. Plate 113, *Steph. and Church. Med. Bot.*

Characters. — Subtriangular, curved, with a longitudinal furrow on the concave side, obtuse at the ends ; from one third of an inch to an inch and a half in length ; of a violet-brown colour on the surface, yellowish within ; solid, frangible, fracture short, odour faintly marked.

Preparations.—Extractum liquidum, Infusum, Tinctura.

FEL BOVINUM PURIFICATUM.

PURIFIED OX BILE.

Characters.—A yellowish-green substance of pilular consistence, having a taste partly sweet and partly bitter, soluble in water and in spirit. A solution of one or two grains of it, in about a fluid drachm of water, when treated, first with a drop of freshly made syrup consisting of one part of sugar and four of water, and then with sulphuric acid cautiously added until the precipitate at first formed is redissolved, gradually acquires a cherry-red colour, which changes in succession to carmine, purple, and violet.

Test.—Its watery solution gives no precipitate on the addition of rectified spirit.

FERRI ARSENIAS.

ARSENIATE OF IRON.

Arsenate of Iron, $3\text{FeO}, \text{AsO}_5$, partially oxidated.

Characters.—A tasteless amorphous powder of a green colour, insoluble in water, but readily dissolved by hydrochloric acid. This solution gives a copious light-blue precipitate with the ferrid-cyanide of potassium, and a still more abundant one of a deeper colour with the ferrocyanide of potassium. A small quantity boiled with an excess of caustic soda and filtered, gives, when exactly neutralized by nitric acid, a brick-red precipitate on the addition of solution of nitrate of silver.

Tests.—The solution in hydrochloric acid when diluted gives no precipitate with chloride of barium. Twenty grains dissolved in an excess of hydrochloric acid diluted with water continue to give a

blue precipitate with the ferridcyanide of potassium, until at least seventeen measures of the volumetric solution of bichromate of potash have been added.

FERRI CARBONAS SACCHARATA.

SACCHARATED CARBONATE OF IRON.

Carbonate of Iron, FeO, CO_2 , mixed with Peroxide of Iron, and Sugar, and forming at least fifty-seven per cent of the mixture.

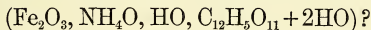
Characters.—Small coherent lumps of a grey-brown colour, with a sweet very feeble chalybeate taste. Dissolves with effervescence in warm hydrochloric acid diluted with half its volume of water, and the solution is but slightly affected by the ferrocyanide, but gives a copious blue precipitate with the ferridcyanide of potassium.

Tests.—Its solution in hydrochloric acid gives but a very slight precipitate with chloride of barium. Twenty grains, dissolved in excess of hydrochloric acid and diluted with water, continue to give a blue precipitate with the ferridcyanide of potassium, until at least thirty-three measures of the volumetric solution of bichromate of potash have been added.

Preparation.—Mistura Ferri composita, Pilula.

FERRI ET AMMONIÆ CITRAS.

CITRATE OF IRON AND AMMONIA.



Characters.—In thin transparent scales of a hyacinth-red colour with a tinge of olive-green, slightly sweetish and astringent in taste;

feebly reddens litmus paper; is soluble in water, almost insoluble in rectified spirit. Heated with solution of soda, it evolves ammonia and deposits peroxide of iron. The alkaline solution from which the iron has separated does not, when slightly supersaturated with hydrochloric acid, give any crystalline deposit.

Tests.—Its solution in water, when acidulated with hydrochloric acid, gives a copious blue precipitate with the ferrocyanide of potassium, but none with the ferridcyanide. When incinerated with exposure to air it leaves 26·5 per cent of peroxide of iron.

FERRI ET QUININÆ CITRAS.

CITRATE OF IRON AND QUINIA.

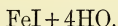
Citric Acid combined with Peroxide of Iron, Protoxide of Iron and Quinia.

Characters.—Thin scales of a greenish golden-yellow colour, somewhat deliquescent, and entirely soluble in cold water. The solution is very slightly acid, and is precipitated reddish-brown by solution of soda, white by solution of ammonia, blue by the ferrocyanide and by the ferridcyanide of potassium, and greyish-black by tannic acid.

Tests.—Taste bitter as well as chalybeate. When burned with exposure to air, it leaves a residue which yields nothing to water. Fifty grains dissolved in a fluid ounce of water and treated with a slight excess of ammonia give a white precipitate, which, when collected on a filter and dried, weighs eight grains. The precipitate is entirely soluble in pure ether, when burned leaves no residue, and when dissolved by the aid of an acid, forms a solution which, decolorized by a little purified animal charcoal, turns the plane of polarization strongly to the left.

FERRI IODIDUM

IODIDE OF IRON.



Characters.—Crystalline, green with a tinge of brown, inodorous, deliquescent, soluble in water, forming a slightly green solution which gradually deposits a rust-coloured sediment, and acquires a red colour. It gives a copious blue precipitate with the ferridcyanide of potassium, and one of a similar colour with mucilage of starch on the addition of a minute quantity of chlorine.

Test.—It dissolves almost entirely in water, leaving but a very small quantity of red sediment.

Preparations.—Pilula, Syrupus.

FERRI OXIDUM MAGNETICUM

MAGNETIC OXIDE OF IRON.

Synonym.—FERRI OXIDUM NIGRUM, *Ed.*

Peroxide of Iron, Fe_2O_3 , with about nine per cent of Protoxide of Iron, FeO , and twenty-two of water.

Characters.—Brownish-black, destitute of taste, strongly magnetic. It dissolves without effervescence in hydrochloric acid diluted with half its bulk of water, and the solution thus obtained gives blue precipitates with the ferrocyanide, and with the ferridcyanide of potassium.

Tests.—Twenty grains moistened with nitric acid, and calcined at a low red heat, leave 15·8 grains of the peroxide of iron. Twenty

grains dissolved in hydrochloric acid continue to give a blue precipitate with the ferridecyanide of potassium until 8·3 measures of the volumetric solution of bichromate of potash have been added.

FERRI PERCHLORIDI LIQUOR.

SOLUTION OF PERCHLORIDE OF IRON.

Perchloride of Iron, Fe_2Cl_3 , in solution in water.

Characters.—An orange-brown solution, without smell, but possessing a strong styptic taste; miscible with water and alcohol in all proportions. Diluted with water it is precipitated white by nitrate of silver, and blue by the ferrocyanide, but not by the ferridecyanide of potassium.

Tests.—Specific gravity 1·338. A fluid drachm diluted with two fluid ounces of water gives, upon the addition of an excess of solution of ammonia, a reddish-brown precipitate, which, when well washed and incinerated, weighs 15·62 grains.

Preparation.—Tinctura.

FERRI PERNITRATIS LIQUOR.

SOLUTION OF PERNITRATE OF IRON.

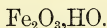
Pernitrate of Iron, Fe_2O_3 , 3NO_5 , in solution in water.

Characters.—A clear solution of a reddish-brown colour, slightly acid and astringent to the taste; gives a blue precipitate with the ferrocyanide of potassium. When to a little of it placed in a test tube half its volume of pure sulphuric acid is added, and then a solution of sulphate of iron is poured on, the whole assumes a dark-brown colour.

Tests.—Specific gravity 1·107. One fluid drachm treated with an excess of solution of ammonia, gives a precipitate which, when washed, dried, and incinerated, weighs 2·6 grains. It gives no precipitate with the ferridcyanide of potassium.

FERRI PEROXIDUM.

PEROXIDE OF IRON.



Characters.—A powder of a dark brown colour, and destitute of taste; dissolves completely, though slowly, with the aid of heat in hydrochloric acid diluted with half its volume of water, forming a solution which gives a copious blue precipitate with the ferrocyanide of potassium.

Tests.—It dissolves completely in hydrochloric acid, and the solution gives no precipitate with chloride of barium, or with the ferridcyanide of potassium.

Preparation.—Emplastrum Ferri.

FERRI PEROXIDUM HYDRATUM.

HYDRATED PEROXIDE OF IRON.

Hydrated Peroxide of Iron, $2\text{Fe}_2\text{O}_3, 3\text{HO}$, with a variable amount of uncombined water.

Characters.—A soft moist pasty mass, of a reddish-brown colour. Dissolves readily in dilute hydrochloric acid without the aid of heat,

forming a solution which gives a copious blue precipitate with the ferrocyanide of potassium. A little of it dried at 212° gives off moisture when further heated in a test tube.

Tests.—Free from grittiness; leaves on calcination about twelve per cent of peroxide of iron.

FERRI PHOSPHAS.

PHOSPHATE OF IRON.

Phosphate of Iron, 3FeO , PO_5 , partially oxidated.

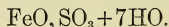
Characters.—A slate-blue amorphous powder, insoluble in water, soluble in hydrochloric acid. The solution yields a precipitate with both the ferrocyanide and the ferridcyanide of potassium, that afforded by the latter being the more abundant; and when treated with tartaric acid and an excess of ammonia, and subsequently with the solution of ammonio-sulphate of magnesia, lets fall a crystalline precipitate.

Test.—If it is digested in hydrochloric acid with a lamina of pure copper, a dark deposit does not form on the metal.

Preparation.—Syrupus.

FERRI SULPHAS.

SULPHATE OF IRON.



Characters.—In oblique rhombic prisms, of a green colour and styptic taste; insoluble in rectified spirit, soluble in water. The solution gives a white precipitate with chloride of barium, and a blue one with the ferridcyanide of potassium, and on exposure

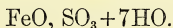
to the air gradually becomes turbid, depositing a reddish-brown sediment.

Tests.—Crystals free from opaque rust-coloured spots, and dissolving in water without leaving any ochry residue. The aqueous solution gives no precipitate with sulphuretted hydrogen, and one nearly white with ferrocyanide of potassium.

Preparation.—Ferri Sulphas exsiccata.

FERRI SULPHAS GRANULATA.

GRANULATED SULPHATE OF IRON.



Characters.—In small granular crystals of a pale-green colour, and mildly styptic taste, soluble in water, insoluble in rectified spirit.

Tests.—Free from opaque rust-coloured spots, and dissolving in water without leaving any ochry residue. The aqueous solution gives no precipitate with sulphuretted hydrogen, and one nearly white with ferrocyanide of potassium.

FERRUM REDACTUM.

REDUCED IRON.

Synonym.—FERRI PULVIS, *Dub.*

Metallic Iron, with a variable amount of Magnetic Oxide of Iron.

Characters.—A fine greyish-black powder, strongly attracted by the magnet, and exhibiting metallic streaks when rubbed with firm

pressure in a mortar. It dissolves in hydrochloric acid with the evolution of hydrogen, and the solution gives a light-blue precipitate with the ferridecyanide of potassium.

Test.—Ten grains added to an aqueous solution of fifty grains of iodine and fifty grains of iodide of potassium, and digested with them in a small flask at a gentle heat, leave not more than five grains undissolved, which should be entirely soluble in hydrochloric acid.

FERRUM TARTARATUM.

TARTARATED IRON.

Synonym.—FERRI POTASSIO-TARTRAS, *Lond.*

Tartrate of Iron and Potash, $\text{Fe}_2\text{O}_3, \text{KO}, \text{C}_8\text{H}_4\text{O}_{10} + \text{HO}$.

Characters.—Thin transparent scales of a deep garnet colour, slightly deliquescent, somewhat sweet, and rather astringent, soluble in water and sparingly soluble in spirit. The aqueous solution, when acidulated with hydrochloric acid, gives a copious blue precipitate with the ferrocyanide of potassium, but no precipitate with the ferridecyanide. When the salt is boiled with solution of soda, peroxide of iron separates, but no ammonia is evolved, and the filtered solution when slightly acidulated by hydrochloric acid gives, as it cools, a crystalline deposit.

Tests.—By incinerating fifty grains of this preparation at a red heat, and acting on the residue with hydrochloric acid, a solution is obtained which, when digested with a little nitric acid, and afterwards diluted with four fluid ounces of water, and supersaturated with ammonia, yields a precipitate of peroxide of iron weighing 14·92 grains.

Preparation.—Vinum Ferri.

FICUS.

FIG.

Ficus Carica Linn. Plate 154, *Steph. and Church. Med. Bot.*

The dried Fruit ; imported from Smyrna.

Characters.—Compressed, soft but tough, brown, covered with a saccharine efflorescence, containing a viscid sweet pulp, and numerous small hard seeds.

FILIX.

FERN ROOT.

Aspidium Filix mas Swartz. Plate 271, *Woodv. Med. Bot.* Indigenous.

The Rhizome dried ; collected in summer.

Characters.—Tufted, scaly, greenish-brown ; powder greenish-yellow, with a disagreeable odour, and a nauseous bitter somewhat astringent taste.

Preparation.—Extractum liquidum.

FŒNICULUM.

SWEET FENNEL FRUIT.

Fœniculum dulce DC.

The Fruit ; imported from Malta.

Characters.—About three lines long and one line broad; elliptical, slightly curved, beaked, having eight pale-brown longitudinal ribs, the two lateral being double; taste and odour aromatic.

Preparation.—Aqua.

GALBANUM.

GALBANUM.

A Gum-resin, derived from an unascertained umbelliferous plant; imported from India and the Levant.

Characters.—In irregular tears, about the size of a pea, usually agglutinated into masses, of a greenish-yellow colour, translucent, having a strong disagreeable odour, and an acrid bitter taste.

Preparations.—Emplastrum, Pilula Assafœtidæ composita.

GALLA.

GALLS.

Excrescences on *Quercus infectoria Olivier*, caused by the punctures and deposited ova of *Diplolepis Gallæ tinctoriæ Latr.* Plate 152, *Steph. and Church.*
Med. Bot.

Characters.—Hard heavy globular bodies varying in size from half an inch to three fourths of an inch in diameter, tuberculated on the surface, the tubercles and intervening spaces smooth; of a bluish-green colour on the surface, yellowish-white within with a small central cavity; intensely astringent.

Preparations.—ACIDUM TANNICUM, Tinctura, Unguentum, Unguentum Gallæ cum Opio.

GENTIANA.

GENTIAN.

Gentiana lutea Linn. Plate 132, *Steph. and Church. Med. Bot.*

The Root dried ; collected in the Alps, Apennines, and other mountainous districts of Europe.

Characters.—From half an inch to one inch in thickness, several inches in length, often twisted, much wrinkled, or marked with close transverse rings, brown externally, yellow within, tough and spongy ; taste at first sweetish, afterwards very bitter.

Preparations.—Extractum, Infusum compositum, Tinctura.

GLYCERINUM.

GLYCERINE.

A sweet principle, $C_6H_8O_6$, obtained from fats and fixed oils.

Characters.—A colourless thick fluid, oily to the touch, without odour, of a sweet taste ; freely soluble in water or in alcohol. When decomposed by heat it evolves intensely irritating vapours.

Test.—Sp. gr. 1.26.

GLYCYRRHIZA.

LIQUORICE ROOT.

Glycyrrhiza glabra Linn. Plate 134, *Steph. and Church.*
Med. Bot.

The Root or underground Stem, fresh and dried ; cultivated in England.

Characters.—In long cylindrical branched pieces, an inch or less in diameter, tough and pliable ; of a greyish-brown colour externally, yellow internally, without odour, of a sweet mucilaginous and slightly acrid taste.

Preparation.—Extractum.

GRANATI RADIX.

POMEGRANATE ROOT.

Punica Granatum Linn. Plate 57, *Steph. and Church.*
Med. Bot.

The Bark of the Root, fresh or dried ; chiefly imported dried from Germany.

Characters.—In quills or fragments of a greyish-yellow colour externally, yellow internally, having a short fracture, little odour, and an astringent slightly bitter taste.

Preparation.—Decoctum.

GUALIACI LIGNUM.

GUALIAC WOOD.

Guaiacum officinale *Linn.* Plate 90, *Steph. and Church. Med. Bot.*

The Wood sliced or coarsely turned ; imported from St. Domingo and Jamaica.

Characters.—Extremely hard ; the young or outer wood is pale-brown, the old or central wood is greenish-brown.

Test.—Nitric acid applied to the dark wood produces a bluish-green colour.

Preparation.—Decoctum Sarsæ compositum.

GUALIACI RESINA.

GUALIAC RESIN.

Synonym.—GUALIACUM, *Lond.*

Guaiacum officinale *Linn.*

The Resin obtained from the stem by natural exudation, by incisions, or by heat.

Characters.—In large masses of a brownish or greenish-brown colour ; fractured surface resinous, translucent at the edges.

Test.—A solution in rectified spirit strikes a clear blue colour when applied to the inner surface of a paring of raw potato.

Preparations.—Mistura, Pilula Calomelanos composita, Tinctura ammoniata.

HÆMATOXYLUM.

LOGWOOD.

Hæmatoxylum campechianum *Linn.* Plate 17, *Woodv. Med. Bot.*

The Heart-wood sliced ; imported from Campeachy in Central America, from Honduras, and Jamaica.

Characters.—The logs are externally of a dark colour, internally they are reddish-brown ; the chips have a feeble agreeable odour, and a sweetish taste ; a small portion chewed imparts to the saliva a dark pink colour.

Preparations.—Decoctum, Extractum.

HEMIDESMUS.

HEMIDESMUS.

Hemidesmus indicus *DC.* Plate 1320, vol. iv. *Wight, Icon. Plant. Ind. Orient.*

The Root dried ; imported from India.

Characters.—Yellowish-brown, cylindrical, tortuous, furrowed and with annular cracks, having a fragrant odour, and a very agreeable flavour.

Preparation.—Syrupus.

HIRUDO.

THE LEECH.

1. *Sanguisuga officinalis Savigny*, The Speckled Leech ; and 2. *S. medicinalis Sav.*, The Green Leech, imported chiefly from Hamburg.

Characters.—Body elongated, two or three inches long, tapering to each end, plano-convex, wrinkled transversely ; back olive-green with six rusty-red longitudinal stripes. 1. Belly greenish-yellow, spotted with black ; 2. Belly olive-green, not spotted.

HORDEUM.

PEARL BARLEY.

Hordeum distichon Linn. Cultivated in Britain.

The Seeds deprived of their husks.

Characters.—White, rounded, retaining a trace of the longitudinal furrow.

Preparation.—Decoctum.

HYDRARGYRI CHLORIDUM. See HYDRARGY-
RUM CORROSIVUM SUBLIMATUM.

HYDRARGYRI IODIDUM RUBRUM.

RED IODIDE OF MERCURY.



Characters.—A crystalline powder of a vermilion colour, becoming yellow when gently heated over a lamp on a sheet of paper; almost insoluble in water, dissolves sparingly in alcohol, but freely in ether, or in an aqueous solution of iodide of potassium. When digested with solution of soda it assumes a reddish-brown colour, and the fluid cleared by filtration and mixed with solution of starch gives a blue precipitate on being acidulated with nitric acid.

Tests.—Entirely volatilized by a heat under redness, and entirely soluble in ether.

Preparation.—Unguentum.

HYDRARGYRI IODIDUM VIRIDE.

GREEN IODIDE OF MERCURY.



Characters.—A dull green powder insoluble in water, which darkens in colour upon exposure to light. When gradually heated in a test tube, it yields a yellow sublimate, which upon friction becomes red, while a globule of metallic mercury is left in the bottom of the tube.

Tests.—Entirely volatilized by a heat under redness. When it is shaken in a tube with ether nothing is dissolved.

HYDRARGYRI NITRATIS LIQUOR ACIDUS.

ACID SOLUTION OF NITRATE OF MERCURY.

Nitrate of Mercury, HgO , NO_5 , in solution in Nitric Acid.

Characters.—A colourless and strongly acid solution, which gives a yellow precipitate with solution of potash added in excess. If a crystal of sulphate of iron be dropped into it, in a little time the salt of iron, and the liquid in its vicinity, acquire a dark colour.

Test.—Specific gravity 2.246. Does not give any precipitate when a little of it is dropped into hydrochloric acid diluted with twice its volume of water.

Preparation.—Unguentum Hydrargyri Nitratis.

HYDRARGYRI OXIDUM RUBRUM.

RED OXIDE OF MERCURY.



Synonym.—HYDRARGYRI NITRICO-OXIDUM, *Lond.*

Characters.—An orange-red powder readily dissolved by hydrochloric acid, and yielding a solution which, with caustic potash added in excess, gives a yellow precipitate, and with solution of ammonia a white precipitate.

Tests.—Entirely volatilized by a heat under redness, being at the same time decomposed into mercury and oxygen. If this be done in a test-tube no orange vapours are perceived. Dissolves without residue in hydrochloric acid.

Preparation.—Unguentum.

HYDRARGYRI SUBCHLORIDUM. See CALO-
MELAS.

HYDRARGYRUM.

MERCURY.

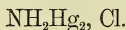
Characters.—Brilliantly lustrous and easily divisible into spherical globules.

Test.—Volatilizes with heat without any residue.

Preparations.—Emplastrum, Emplastrum Ammoniaci cum Hydrargyro, Hydrargyrum cum Creta, Linimentum, Pilula, Unguentum.

HYDRARGYRUM AMMONIATUM.

AMMONIATED MERCURY.



Synonyms.—HYDRARGYRI AMMONIO-CHLORIDUM, *Lond. Dub.*

HYDRARGYRI PRÆCIPITATUM ALBUM, *Ed.*

Characters.—An opaque white powder on which cold water, alcohol, and ether have no action. Digested with caustic potash, it evolves ammonia, acquiring a pale yellow colour, and the fluid, filtered, and acidulated with nitric acid, gives a white precipitate with nitrate of silver. Boiled with a solution of chloride of tin it becomes grey, and affords globules of metallic mercury.

Test.—Entirely volatilized at a heat under redness.

Preparation.—Unguentum.

HYDRARGYRUM CORROSIVUM SUBLIMATUM.

CORROSIVE SUBLIMATE.

Chloride of Mercury, HgCl .

Characters.—In heavy colourless masses of prismatic crystals, possessing a highly acrid metallic taste, more soluble in alcohol, and still more so in ether, than in water. Its aqueous solution gives a yellow precipitate with caustic potash, a white precipitate with ammonia, and a curdy white precipitate with nitrate of silver.

Tests.—Entirely soluble in ether. When heated it sublimes without decomposing, or leaving any residue.

HYOSCYAMUS.

HYOSCYAMUS.

Hyoscyamus niger Linn. Plate 9, *Steph. and Church. Med. Bot.*

The Leaves and Branches of the indigenous biennial plant dried; collected when about two thirds of the flowers are expanded.

Characters.—Leaves sinuated, clammy, and hairy. The fresh herb has a strong unpleasant odour, and a slightly acrid taste, which nearly disappear on drying.

Preparations.—Extractum, Tinctura.

IODUM.

IODINE.

Characters.—Laminar crystals of a peculiar odour, dark colour, and metallic lustre, which, when heated, yield a beautiful violet-coloured vapour; very sparingly soluble in water, but freely dissolved by alcohol, by ether, and by a solution of iodide of potassium. The aqueous solution strikes a deep blue colour with starch.

Tests.—Entirely soluble in ether. It sublimes without leaving any residue, and the portion which first comes over does not include any slender colourless prisms emitting a pungent odour. 12·7 grains dissolved in an ounce of water containing fifteen grains of iodide of potassium require for complete decoloration 100 measures of the volumetric solution of hyposulphite of soda.

Preparations.—Linimentum, Tinctura, Unguentum compositum.

IPECACUANHA.

IPECACUAN.

Cephaëlis Ipecacuanha DC. Plate 62, *Steph. and Church. Med. Bot.*

The Root dried; imported from Brazil.

Characters.—In pieces three or four inches long, about the size of a small quill, contorted, and irregularly annulated. Colour brown of various shades. It consists of two parts, the cortical or active portion which is brittle, and a slender tough white woody centre. Powder, pale brown, with a faint nauseous odour, and a somewhat acrid and bitter taste.

Preparations.—Pulvis Ipecacuanhæ cum Opio, Trochisci Morphicæ et Ipecacuanhæ, Vinum.

JALAPA.

JALAP.

Exogonium Purga *Bentham*. Plate 4280, vol. lxxv.
Bot. Mag.

The Tubers dried ; imported from Mexico.

Characters.—Varying from the size of a nut to that of an orange, ovoid, the larger tubers frequently incised, covered with a thin brown wrinkled cuticle ; presenting when cut a yellowish-grey colour, with dark-brown concentric circles.

Preparations.—Extractum, Pulvis compositus, Pulvis Scammonii compositus, Resina, Tinctura.

JALAPÆ RESINA.

RESIN OF JALAP.

A Resin obtained from Jalap by means of rectified spirits.

Characters.—In dark-brown opaque fragments, translucent at the edges, brittle, breaking with a resinous fracture, readily reduced to a pale-brown powder, sweetish in odour, acrid in the throat ; easily soluble in rectified spirit, but only partially so in ether, and insoluble in oil of turpentine.

JUNIPERI OLEUM. See OLEUM JUNIPERI.

KAMELA.

KAMELA.

Rottlera tinctoria. *Roxb. Corom.* Plate 168.

The Powder which adheres to the capsules; imported from India.

Characters.—Granular, of an orange-red colour, inflammable; it is with difficulty mixed with water, but when boiled with alcohol the greater part is dissolved, forming a red solution.

Test.—Ether dissolves most of it; the residue consisting principally of tufted hairs.

KINO.

KINO.

Pterocarpus Marsupium DC. Plate 116, *Roxb. Corom.*

The Juice obtained from incisions in the trunk, inspissated; imported from Malabar.

Characters.—In small angular brittle glistening reddish-black fragments, translucent and ruby-red on the edges, inodorous, very astringent. When chewed it tinges the saliva blood-red.

Preparations.—*Pulvis Catechu compositus*, *Pulvis Kino cum Opio*, *Tinctura*.

KRAMERIA.

RHATANY.

Krameria triandra Ruiz and Pavon, Flor. Peruv. Plate 72, Steph. and Church. Med. Bot.

The Root dried ; imported from Peru.

Characters.—About an inch in diameter, branches numerous, long, brownish-red and rough externally, reddish-yellow internally, strongly astringent, tinging the saliva red.

Preparations.—Extractum, Infusum, Pulvis Catechu compositus, Tinctura.

KUSSO. See CUSSO.

LAUROCERASUS.

CHERRY-LAUREL LEAVES.

Prunus Laurocerasus Linn. The Common or Cherry Laurel. Plate 117, *Steph. and Church. Med. Bot.*

The fresh Leaves ; from plants cultivated in Britain.

Characters.—Ovate-lanceolate or elliptical, distantly toothed, furnished with glands at the base, smooth and shining, deep green, on strong short footstalks ; emitting a ratafia odour when bruised.

Preparation.—Aqua.

LAVANDULÆ OLEUM. See OLEUM LAVANDULÆ.

LIMONIS CORTEX.

LEMON PEEL.

Citrus Limonum *DC.* Plate 92, *Steph. and Church. Med. Bot. (Citrus Medica).*

The fresh outer part of the Rind of the ripe fruit imported from southern Europe.

Characters.—In thin slices of a yellow colour, dotted with numerous vesicles of oil, with a fragrant odour, and aromatic slightly bitter taste.

Preparations.—Syrupus, Tinctura.

LIMONIS OLEUM. See OLEUM LIMONIS.

LIMONIS SUCCUS.

LEMON JUICE.

Citrus Limonum *DC.*

The expressed Juice of the ripe fruit.

Characters.—A slightly turbid yellowish liquor, possessing a sharp acid taste, and grateful odour.

Preparations.—ACIDUM CITRICUM, Syrupus.

LINI FARINA.

LINSEED MEAL.

Linum usitatissimum *Linn.* Plate 22, fasc. 5, *Flor. Lond.*

The Seeds ground and deprived of their oil by expression.

Preparation.—Cataplasma.

LINI OLEUM. See OLEUM LINI.

LINI SEMEN.

LINSEED.

Linum usitatissimum *Linn.*

The Seeds ; cultivated in Britain.

Characters.—Small, oval, pointed, flat, with acute edges, smooth, shining, brown externally, yellowish-white within, of a mucilaginous oily taste.

Preparation.—Infusum.

LITHARGYRUM.

LITHARGE.

Synonym.—PLUMBI OXIDUM, *Lond. Dub.*

PbO.

Characters.—In heavy scales of a pale brick-red colour, soluble in nitric and acetic acids, either solution, when neutral, giving a copious yellow precipitate with iodide of potassium.

Tests.—It dissolves without effervescence in nitric acid diluted with six volumes of water, and the solution, when supersaturated with ammonia and then cleared by filtration, does not exhibit a blue colour.

Preparation.—Emplastrum.

LITHIÆ CARBONAS.

CARBONATE OF LITHIA.

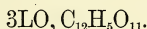
LO, CO₂.

Characters.—In white powder or in minute crystalline grains, alkaline in reaction, soluble in 100 parts of cold water, insoluble in alcohol. It dissolves with effervescence in hydrochloric acid; and the solution evaporated to dryness leaves a residue of chloride of lithium, which redissolved in water yields a precipitate with phosphate of soda.

Tests.—Ten grains of the salt neutralized with sulphuric acid and afterwards heated to redness leave 14·86 grains of dry sulphate of lithia; which, when redissolved in distilled water, yields no precipitate with oxalate of ammonia or solution of lime.

LITHIÆ CITRAS.

CITRATE OF LITHIA.



Characters.—A white amorphous powder, deliquescent, and soluble in water without leaving any residue. Heated to redness it blackens, evolving inflammable gases; and the residue, neutralized by hydrochloric acid, yields with rectified spirit a solution which burns with a crimson flame.

Test.—Twenty grains of the salt, burned at a low red heat with free access of air, leave 10·6 grains of white residue.

LOBELIA.

LOBELIA.

Lobelia inflata Linn. Plate 19, *Bigelow's Med. Bot.*

The Herb in flower, dried; imported from North America.

Characters.—Stem angular; leaves alternate, ovate, toothed, somewhat hairy beneath; capsule ovoid, inflated, ten-ribbed; herb acrid. Usually in compressed rectangular parcels.

Preparations.—Tinctura, Tinctura ætherea.

LUPULUS.

Hop.

Humulus Lupulus Linn. Plate 41, *Steph. and Church. Med. Bot.*

The dried Catkins of the female plant; cultivated in England.

Characters.—Scales of a greenish-yellow colour, with an adherent golden-yellow powder (Lupuline) at their base; odour aromatic, taste bitter.

Preparations.—Extractum, Infusum, Tinctura.

MAGNESIA.

MAGNESIA.

MgO.

Characters.—A white powder, insoluble in water, but readily dissolved by acids without effervescence. Its solution in hydrochloric acid, when neutralized by a mixed solution of ammonia and hydrochlorate of ammonia, gives a copious crystalline precipitate when phosphate of soda is added to it.

Tests.—Dissolved in nitric acid, and neutralized with a mixture of ammonia and hydrochlorate of ammonia, it does not give any precipitate with oxalate of ammonia, or chloride of barium.

MAGNESIA LEVIS.

LIGHT MAGNESIA.



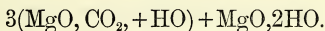
Characters.—A bulky white powder differing from the preceding preparation only in its greater levity, the volumes corresponding to the same weight being to each other in the ratio of three and a half to one.

Preparation.—Pulvis Rhei compositus.

MAGNESIÆ CARBONAS.

CARBONATE OF MAGNESIA.

Synonym.—MAGNESIÆ CARBONAS PONDEROSUM, *Dub.*



Characters.—A white granular powder, which dissolves with effervescence in the dilute mineral acids, yielding solutions which, when first treated with hydrochlorate of ammonia, are not disturbed by the addition of an excess of solution of ammonia, but yield a copious crystalline precipitate upon the addition of phosphate of soda.

Tests.—With excess of hydrochloric acid it forms a clear solution in which chloride of barium causes no precipitate. Another portion of the solution supersaturated with ammonia gives no precipitate with oxalic acid. Fifty grains calcined at a red heat are reduced to twenty-two.

MAGNESIÆ CARBONAS LEVIS.

LIGHT CARBONATE OF MAGNESIA.



Characters.—A very light powder, which, when examined under the microscope, is found to be partly amorphous with numerous slender prisms intermixed. The other characters and tests are the same as those of carbonate of magnesia.

MAGNESIÆ SULPHAS.

SULPHATE OF MAGNESIA.



Characters.—In minute colourless and transparent rhombic prisms, possessing a bitter taste. It readily dissolves in water, and the solution gives copious white precipitates with chloride of barium, and with a mixed solution of ammonia, hydrochlorate of ammonia, and phosphate of soda.

Tests.—Its aqueous solution at ordinary temperatures is not precipitated by oxalate of ammonia. The precipitate given by carbonate of soda, when obtained from a boiling solution of one hundred grains of the salt, should, when well washed dried and heated to redness, weigh 16·26 grains.

Preparation.—Enema.

MANNA.

MANNA.

Fraxinus Ornus *Linn.* and Fraxinus rotundifolia *DC.*
Plate 53, *Steph. and Church. Med. Bot.*

A concrete Exudation from the stem, obtained by incisions; imported from Sicily and the south of Europe.

Characters.—In stalactiform pieces from one to six inches in length, and one or two inches in width, uneven, porous, and friable, furrowed on one side, of a yellowish-white colour, with a faintly nauseous odour, and a sweetish taste; soluble in water and rectified spirit.

MASTICHE.

MASTICH.

Pistacia Lentiscus *Linn.* Plate 130, *Steph. and Church. Med. Bot.*

A resinous Exudation from the stem, obtained by incision; imported from Turkey and the Levant.

Characters.—Small irregular yellowish tears, brittle, becoming soft and ductile when chewed, having a faint agreeable odour.

MATICA.

MATICO.

Artanthe elongata Miquel, Comment. Plate 57, Ruiz and Pavon, Flor. Peruv. (Piper angustifolium).

The dried Leaves, imported from Peru.

Characters.—From two to eight inches long, veined and tessellated on the upper surface, downy beneath, with an aromatic slightly astringent warm taste, and an agreeable aromatic odour.

Preparation.—Infusum.

MEL.

HONEY.

Apis mellifica Linn. The Hive Bee.

A Saccharine Secretion deposited by the insect in the honeycomb ; British and imported.

Characters.—A viscid semitranslucent liquid, of a brownish-yellow colour, with a peculiar heavy odour, and a very sweet taste.

Test.—Boiled with water for five minutes and allowed to cool it does not become blue with the solution of iodine.

Preparation.—Mel depuratum.

MENTHÆ PIPERITÆ OLEUM. See OLEUM
MENTHÆ PIPERITÆ.

MENTHÆ VIRIDIS OLEUM. See OLEUM
MENTHÆ VIRIDIS.

MEZEREUM.

MEZEREON.

Daphne Mezereum *Linn.* Mezereon. Plate 65, *Steph.*
and Church. Med. Bot.

Or,

Daphne Laureola *Linn.* Spurge Laurel. Plate 119,
vol. ii. *Eng. Bot.*

The Bark dried.

Characters. — In strips or quilled pieces of various lengths, tough
and pliable, olive-brown on the surface, white within, fibrous, odour
faintly nauseous, taste hot and acrid.

Preparation. — Decoctum Sarsæ compositum.

MORI SUCCUS.

MULBERRY JUICE.

Morus nigra *Linn.* Plate 39, *Steph. and Church.*
Med. Bot.

The Juice of the ripe fruit cultivated in Britain.

Characters. — Of a dark violet colour, with a faint odour, and an
acidulous sweet taste.

Preparation. — Syrupus.

MORPHLÆ HYDROCHLORAS.

HYDROCHLORATE OF MORPHIA.

Synonym.—MORPHLÆ MURIAS, *Ed. Dub.*

The Hydrochlorate of an Alkaloid, $C_{34}H_{19}NO_6$, $HCl + 6HO$, prepared from Opium.

Characters.—In white flexible acicular prisms of a silky lustre, not changed by exposure to the air, and soluble in water and spirit. The aqueous solution gives a white curdy precipitate with nitrate of silver, and a white one with potash, which is redissolved when an excess of the alkali is added. Moistened with strong nitric acid it becomes orange-red, and, with solution of perchloride of iron, greenish-blue.

Tests.—Entirely destructible by heat, leaving no residue. Twenty grains of the salt dissolved in half an ounce of warm water, with ammonia added in the slightest possible excess, give on cooling a crystalline precipitate which, when washed with a little cold water, and dried by exposure to the air, weighs 15·18 grains.

Preparations.—Liquor, Trochisci, Trochisci Morphię et Ipecacuanhę.

MORRHUÆ OLEUM. See OLEUM MORRHUÆ.

MOSCHUS.

MUSK.

Moschus moschiferus *Linn.* Native of Thibet and other parts of Central Asia.

The inspissated Secretion from the preputial follicles, dried; imported from China.

Characters.—In irregular reddish-black rather unctuous grains; having a strong peculiar very diffusible odour, and a bitter aromatic taste; contained in a round or slightly oval membranous sac, about two inches in diameter, covered on the outer side with stiff greyish hairs arranged in a concentric manner around its central orifice.

MYRISTICA.

NUTMEG.

Myristica officinalis Linn. *Suppl.* Plate 104, *Steph. and Church. Med. Bot.*

The Kernel of the Seed; imported from Sumatra and the Molucca Islands.

Characters.—Egg-shaped or nearly round, about an inch in length, marked externally with reticulated furrows, internally greyish-red with dark brownish veins. It has a strong peculiar odour, and a bitter aromatic taste.

Preparations.—*Pulvis aromaticus*, *Tinctura Lavandulæ composita*.

MYRISTICÆ ADEPS.

CONCRETE OIL OF NUTMEG.

A concrete Oil obtained by means of expression and heat from Nutmegs.

Characters.—Of an orange colour, firm consistence, and fragrant odour like that of nutmeg; soluble in four times its weight of boiling alcohol, or half that quantity of ether.

MYRISTICÆ OLEUM. See OLEUM MYRISTICÆ.

MYRRHA.

MYRRH.

Balsamodendron Myrrha *Ehrenb.* Plate 357, *Nees, Plant. Med.*

A Gum-resinous Exudation from the stem; collected in Arabia Felix and Abyssinia.

Characters. — In irregular-shaped tears or masses varying much in size, somewhat translucent, of a reddish-yellow, or reddish-brown colour, fractured surface irregular and somewhat oily; odour agreeable and aromatic, taste acrid and bitter.

Preparations. — Decoctum Aloes compositum, Pilula Aloes et Myrrhæ, Pilula Rhei composita, Tinctura.

NECTANDRA.

BEBEERU BARK.

Nectandra Rodiæi *Schomburgk*, in *Hooker's Journ. of Bot.*, 2nd ser. The Greenheart tree.

The Bark imported from British Guiana.

Characters. — In large flat heavy pieces from one to two feet long, from two to six inches broad, and about a quarter of an inch thick. External colour greyish-brown, internal dark cinnamon-brown. Taste strongly and persistently bitter, with considerable astringency.

Preparation. — BEBERIE SULPHAS.

NUX VOMICA.

Nux Vomica.

Strychnos Nux vomica Linn. Plate 52, *Steph. and Church. Med. Bot.*

The Seeds imported from the East Indies.

Characters.—Nearly circular and flat, about an inch in diameter umbilicated and slightly convex on one side, externally of an ash-grey colour, thickly covered with short satiny hairs, internally translucent, tough and horny, taste intensely bitter, inodorous.

Preparations.—STRYCHNIA, Extractum, Tinctura.

OLEUM AMYGDALÆ.

ALMOND OIL.

The Oil expressed in England from Almonds.

Characters.—Pale yellow, nearly inodorous or having a nutty odour, with a bland oleaginous taste.

Preparations.—Unguentum Cetacei, Unguentum simplex.

OLEUM ANETHI.

OIL OF DILL.

The Oil distilled in England from Dill.

Characters.—Colour pale yellow, odour pungent, taste acrid sweetish.

OLEUM ANISI.

OIL OF ANISE.

Pimpinella Anisum Linn. Anise. Plate 180, *Woodv. Med. Bot.*

The Oil distilled from the fruit in Europe.

And,

Illicium anisatum Linn. Star Anise. Plate 369, *Nees, Plant. Med.*

The Oil distilled from the fruit in China.

Characters.—Colourless or pale yellow; with the odour of anise, and a warm sweetish taste. Concretes at 50°.

OLEUM ANTHEMIDIS.

ENGLISH OIL OF CHAMOMILE.

The Oil distilled in England from Chamomile flowers.

Characters.—Pale blue or greenish-blue, but gradually becoming yellow; with the peculiar odour and aromatic taste of the flowers.

Preparation.—Extractum.

OLEUM CAJUPUTI.

OIL OF CAJUPUT.

Melaleuca minor DC. Plate 84, *Steph. and Church. Med. Bot. (M. Cajuputi.)*

The Oil distilled from the leaves in the Molucca Islands.

Characters.—Very mobile, transparent, of a fine pale bluish-green colour. It has a strong agreeable odour, and a warm aromatic taste, and leaves a sensation of coldness in the mouth.

Preparation.—Spiritus.

OLEUM CARUI.

OIL OF CARAWAY.

The Oil distilled in England from Caraway.

Characters.—Colourless or pale yellow, odour aromatic, and taste spicy.

Preparation.—Aqua.

OLEUM CARYOPHYLLI.

OIL OF CLOVES.

The Oil distilled in England from Cloves.

Characters.—Colourless when recent, but gradually becoming red-brown, having the odour of cloves and a pungent spicy taste. Sinks in water.

OLEUM CINNAMOMI.

OIL OF CINNAMON.

The Oil distilled from Cinnamon; imported from Ceylon.

Characters. — Yellowish when recent, gradually becoming red, having the odour and taste of cinnamon. Sinks in water.

Preparation.—Aqua.

OLEUM COPAIBÆ.

OIL OF COPAIVA.

The Oil distilled from Copaiva.

Characters.—Colourless or pale yellow, with the odour and taste of copaiva.

OLEUM CORIANDRI.

OIL OF CORIANDER.

The Oil distilled in England from Coriander.

Characters.—Yellowish, having the odour of coriander.

OLEUM CROTONIS.

CROTON OIL.

Croton Tiglium *Linn.* Plate 4, *Steph. and Church.*
Med. Bot.

The Oil expressed from the seeds in England.

Characters.—Slightly viscid; colour brownish-yellow, taste acrid, odour faintly nauseous.

Tests.—Agitated with its own volume of alcohol, and gently heated, it forms a clear solution, from which about three fourths of the oil separate on cooling.

Preparation.—Linimentum.

OLEUM CUBEBAE.

OIL OF CUBEBS.

The Oil distilled in England from Cubebs.

Characters.—Colourless or pale greenish-yellow, having the peculiar odour and taste of cubebs.

OLEUM JUNIPERI.

ENGLISH OIL OF JUNIPER.

Juniperus communis Linn. Plate 95, *Woodv. Med. Bot.*

The Oil distilled in England from the unripe fruit.

Characters.—Colourless or pale greenish-yellow, of a sweetish odour, and warm aromatic taste.

Preparation.—Spiritus.

OLEUM LAVANDULÆ.

ENGLISH OIL OF LAVENDER.

Lavandula vera DC. Plate 55, *Woodv. Med. Bot.*
(*L. Spica*).

The Oil distilled in England from the flowers.

Characters.—Colourless or pale yellow, with the odour of lavender, and a hot bitter aromatic taste.

Preparations.—Spiritus, Tinctura composita.

OLEUM LIMONIS.

OIL OF LEMON.

The Oil expressed or distilled from fresh Lemon Peel ; imported chiefly from Sicily.

Characters.—Colour pale yellow, odour agreeable, taste warm and bitter.

Preparation.—Spiritus Ammoniæ aromaticus.

OLEUM LINI.

LINSEED OIL.

The Oil expressed without heat from Linseed.

Characters.—Viscid, yellow, with a faint odour, and oleaginous taste.

OLEUM MENTHÆ PIPERITÆ.

ENGLISH OIL OF PEPPERMINT.

Mentha piperita Linn. Plate 169, *Woodv. Med. Bot.*

The Oil distilled in England from the fresh herb when in flower.

Characters.—Colourless or pale yellow, with the odour of peppermint; taste warm aromatic, succeeded by a sensation of coldness in the mouth.

Preparations.—Aqua, Spiritus.

OLEUM MENTHÆ VIRIDIS.

ENGLISH OIL OF SPEARMINT.

Menthæ viridis Linn. Plate 170, *Woodv. Med. Bot.*

The Oil distilled in England from the fresh herb when in flower.

Characters.—Colourless or pale yellow, with the odour and taste of spearmint.

Preparation.—Aqua.

OLEUM MORRHUÆ.

COD-LIVER OIL.

Gadus Morrhua Linn.

The Oil extracted from the fresh Liver by a steam heat not exceeding 180°.

Characters.—Pale yellow, with a slight fishy odour, and bland fishy taste.

OLEUM MYRISTICÆ.

VOLATILE OIL OF NUTMEG.

The Oil distilled in England from Nutmeg.

Characters.—Colourless or straw-yellow, having the odour and taste of nutmegs.

Preparations.—Spiritus, Spiritus Ammoniæ aromaticus.

OLEUM OLIVÆ.

OLIVE OIL.

Olea europæa Linn. Plate 15, *Steph. and Church. Med. Bot.*

The Oil expressed from the fruit in the south of Europe.

Characters.—Pale yellow, with scarcely any odour, and a bland oleaginous taste; congeals partially at about 36°.

Preparations.—Linimentum Calcis, Linimentum Camphoræ.

OLEUM PIMENTÆ.

OIL OF PIMENTO.

The Oil distilled in England from Pimento.

Characters.—Colourless or slightly reddish when recent, but becoming brown by age, having the odour and taste of pimento. Sinks in water.

OLEUM RICINI.

CASTOR OIL.

Ricinus communis *Linn.* Plate 2209, *Bot. Mag.*

The Oil expressed from the seeds in England, or imported from the East Indies and America.

Characters.—Viscid, colourless, or pale straw-yellow, having a slightly nauseous odour, and a somewhat acrid taste.

Tests.—Entirely soluble in one volume of alcohol, and in two volumes of rectified spirit.

OLEUM ROSMARINI.

ENGLISH OIL OF ROSEMARY.

Rosmarinus officinalis *Linn.* Plate 24, *Steph. and Church. Med. Bot.*

The Oil distilled in England from the flowering tops.

Characters.—Colourless, with the odour of rosemary, and a warm aromatic taste.

Preparations.—Linimentum Saponis, Spiritus, Tinctura Lavandulæ composita.

OLEUM RUTÆ.

ENGLISH OIL OF RUE.

Ruta graveolens *Linn.* Plate 37, *Woodv. Med. Bot.*

The Oil distilled in England from the fresh leaves and the unripe fruit.

Characters.—Colour pale yellow, odour disagreeable, taste bitter acrid.

OLEUM SABINÆ.

ENGLISH OIL OF SAVIN.

The Oil distilled in England from fresh Savin.

Characters.—Colourless or pale yellow.

OLEUM TEREBINTHINÆ.

OIL OF TURPENTINE.

Pinus palustris *Miller's Dict.*, *Pinus Tæda* *Linn.*, and sometimes *Pinus Pinaster* *Aiton.* Plates 9, 10, 16, 17, 20, *Lambert, Pinus.*

The Oil distilled from the turpentine; imported from America and France.

Characters.—Limpid, colourless, with a strong peculiar odour, and pungent and bitter taste.

Preparations. — *Confectio*, *Enema*, *Linimentum*, *Linimentum aceticum*, *Unguentum*.

OLIVÆ OLEUM. See OLEUM OLIVÆ.

OPIUM.

OPIUM.

Papaver somniferum Linn.

The inspissated Juice ; obtained by incision from the unripe capsules grown in Asia Minor.

Characters. — Irregular lumps, weighing from four ounces to two pounds ; enveloped in a poppy leaf, and generally covered with rumex seeds ; when fresh, plastic, tearing with an irregular slightly moist chestnut-brown surface, shining when rubbed smooth with the finger, having a most peculiar odour and nauseous bitter taste.

Tests. — Take of opium one hundred grains, slaked lime one hundred grains, distilled water four ounces. Break down the opium, and steep it in an ounce of the water for twenty-four hours, stirring the mixture frequently. Transfer it to a displacement apparatus, and pour on the remainder of the water in successive portions, so as to exhaust the opium by percolation. To the infusion thus obtained, placed in a flask, add the lime, boil for ten minutes, place the undissolved matter on a filter, and wash it with an ounce of boiling water. Acidulate the filtered fluid slightly with dilute hydrochloric acid, evaporate it to the bulk of half an ounce, and let it cool. Neutralize cautiously with solution of ammonia, carefully avoiding an excess ; remove by filtration the brown matter which separates, wash it with an ounce of hot water, mix the washings with the filtrate, concentrate the whole to the bulk of half an ounce, and add now solution of ammonia in slight excess. After twenty-four

hours collect the precipitated morphia on a weighed filter, wash it with cold water, and dry it at 212°. It ought to weigh at least from six to eight grains.

Preparations. — MORPHIÆ HYDROCHLORAS, Emplastrum, Enema, Extractum, Extractum liquidum, Linimentum, Pilula, Pilula Plumbi cum Opio, Pulvis Cretæ aromaticus cum Opio, Pulvis Ipecacuanhæ cum Opio, Pulvis Kino cum Opio, Tinctura, Tinctura Camphoræ cum Opio, Vinum, Unguentum Gallæ cum Opio.

PAPAYER.

POPPY CAPSULES.

Papaver somniferum Linn. White Poppy. Plate 185, *Woodv. Med. Bot.*

The nearly ripe Capsules, dried and deprived of the seeds; cultivated in Britain.

Characters. — Globular, two or three inches in diameter, crowned by a sessile stellate stigma; of an opiate taste.

Preparations. — Decoctum, Syrupus.

PAREIRA.

PAREIRA.

Cissampelos Pareira Linn. Plate 82, *Woodv. Med. Bot.*

The dried Root; from Brazil.

Characters. — Cylindrical oval or compressed pieces, entire or split longitudinally, half an inch to four inches in diameter, and four inches to four feet in length. Bark greyish-brown, longitudi-

nally wrinkled, crossed transversely by annular elevations; interior woody, yellowish-grey, porous, with well-marked often incomplete concentric rings and medullary rays. Taste at first sweetish and aromatic, afterwards intensely bitter.

Preparations.—Decoctum, Extractum liquidum.

PIMENTA.

PIMENTO.

Eugenia Pimenta DC. Allspice Tree. Plate 26, *Woodv. Med. Bot.*

The dried unripe Berries; from the West Indies.

Characters.—Of the size of a small pea, brown, rough, crowned with the teeth of the calyx, yellowish within, and containing two dark brown seeds. Odour and taste aromatic, hot, and peculiar.

Preparation.—Aqua.

PIMENTÆ OLEUM. See OLEUM PIMENTÆ.

PIPER.

BLACK PEPPER.

Piper nigrum Linn. Plate 187, *Woodv. Med. Bot.*

The dried unripe Berries; chiefly from the West Indies.

Characters.—Small, roundish, wrinkled; tegument brownish-black, containing a greyish-yellow globular seed. Odour aromatic. Taste pungent, and bitterish.

Preparation.—Confectio.

PIX BURGUNDICA.

BURGUNDY PITCH.

Abies excelsa Lamarch. Spruce Fir. Plate 208, *Woodv. Med. Bot.* (*Pinus Abies.*)

A Resinous Exudation from the stem melted and strained; imported from Switzerland.

Characters.—Hard and brittle, yet gradually taking the form of the vessel in which it is kept; opaque, varying in colour but generally dull reddish-brown; of a peculiar somewhat empyreumatic perfumed odour, and aromatic taste.

Tests.—Without bitterness; free from vesicles; gives off no water when it is heated.

Preparation.—Emplastrum.

PIX LIQUIDA.

TAR.

A Bituminous Liquid, obtained from the wood of *Pinus sylvestris Linn.* and other pines, by destructive distillation.

Characters.—Thick, viscid, brownish-black, of a well-known peculiar aromatic odour. Water agitated with it acquires a pale brown colour, sharp empyreumatic taste, and acid reaction.

PLUMBI ACETAS.

ACETATE OF LEAD.



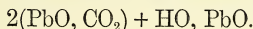
Characters.—In white masses of interlaced acicular crystals, slightly efflorescent, having an acetous odour, and a sweet astringent taste. Its solution in water slightly reddens litmus, gives a yellow precipitate with iodide of potassium, and is precipitated white by sulphuric acid, acetic acid being set free.

Tests.—Its solution in distilled water is clear, or has only a slight muddiness, which disappears on the addition of acetic acid. Thirty-eight grains dissolved in water require for complete precipitation twenty measures of the volumetric solution of oxalic acid.

Preparation.—Pilula Plumbi cum Opio.

PLUMBI CARBONAS.

CARBONATE OF LEAD.



Characters.—A soft heavy white powder, blackened by sulphuretted hydrogen, insoluble in water, soluble with effervescence in diluted nitric acid, forming a solution which is precipitated yellow by iodide of potassium, and white by sulphuric acid.

Tests.—Dissolves in acetic acid without leaving any residue, and the solution when treated with excess of sulphuretted hydrogen, boiled and filtered, gives no precipitate with oxalate of ammonia.

Preparation.—Unguentum.

PLUMBI SUBACETATIS LIQUOR.

SOLUTION OF SUBACETATE OF LEAD.

Subacetate of Lead, 2PbO , $\text{C}_4\text{H}_3\text{O}_3$, dissolved in water.

Characters.—A dense clear colourless liquid, with alkaline reaction and sweet astringent taste, becoming turbid by exposure to the air; and forming with mucilage of gum arabic an opaque white jelly. Sulphuric acid in excess gives a white precipitate, acetic acid being set free.

Tests.—Specific gravity 1.26. Two fluid drachms require for perfect precipitation twenty-seven measures of the volumetric solution of oxalic acid.

Preparations.—Liquor dilutus, Unguentum.

PODOPHYLLI RESINA.

RESIN OF PODOPHYLLUM.

A Resin obtained from Podophyllum, by means of rectified spirit.

Characters.—A pale greenish-brown amorphous powder, soluble in rectified spirit and in ammonia; precipitated from the former solution by water, from the latter by acids.

Test.—Almost entirely soluble in pure ether.

PODOPHYLLUM.

PODOPHYLLUM.

Podophyllum peltatum Linn. Plate 1819, *Bot. Mag.*

The Root dried; imported from North America.

Characters.—In pieces of variable length, about two lines thick, mostly wrinkled longitudinally, dark reddish-brown externally, whitish within, breaking with a short fracture; accompanied with pale brown rootlets. Powder yellowish-grey, sweetish in odour, bitterish subacid and nauseous in taste.

Preparation.—Resina.

POTASSA CAUSTICA.

CAUSTIC POTASH.

Synonyms.—POTASSÆ HYDRAS, *Lond.*

POTASSA, *Ed.*

Hydrate of Potash, KO, HO.

Characters.—In hard white pencils, very deliquescent, powerfully alkaline and corrosive. A watery solution acidulated by nitric acid gives a yellow precipitate with bichloride of platinum, and scanty white precipitates with nitrate of silver and chloride of barium.

Tests.—Fifty-six grains dissolved in water leave only a trace of sediment, and require for neutralization at least ninety measures of the volumetric solution of oxalic acid.

Preparation.—Liquor.

POTASSA SULPHURATA.

SULPHURATED POTASH.

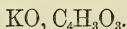
Tersulphuret of Potassium, KS_3 , with Sulphate of Potash.

Characters.—Solid greenish masses, liver-brown when recently broken, alkaline, and acrid to the taste, readily forming with water a yellow solution, which has the odour of sulphuretted hydrogen, and evolves it freely when excess of hydrochloric acid is dropped into it, sulphur being at the same time deposited. The acid fluid when boiled and filtered is precipitated yellow by bichloride of platinum, and white by chloride of barium.

Test.—About three fourths of its weight are dissolved by rectified spirit.

POTASSÆ ACETAS.

ACETATE OF POTASH.

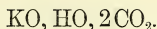


Characters.—White foliaceous satiny masses, very deliquescent, with a watery solution of which, tartaric acid causes a crystalline precipitate, sulphuric acid the disengagement of acetic acid, and a dilute solution of perchloride of iron strikes a blood-red colour.

Tests.—Neutral to test paper, entirely soluble in rectified spirit. Its solution is unaffected by hydrosulphuret of ammonia.

POTASSÆ BICARBONAS.

BICARBONATE OF POTASH.

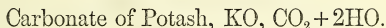


Characters.—Colourless right rhombic prisms, not deliquescent, of a saline feebly alkaline taste, not corrosive. Dilute hydrochloric acid causes strong effervescence, forming a solution with which bichloride of platinum gives a yellow precipitate.

Tests.—Fifty grains exposed to a low red heat, leave thirty-four and a half grains of a white residue, which require for exact saturation fifty measures of the volumetric solution of oxalic acid.

POTASSÆ CARBONAS.

CARBONATE OF POTASH.

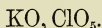


Characters.—A white crystalline powder, alkaline and caustic to the taste, very deliquescent, readily soluble in water but insoluble in spirit, effervescing with dilute hydrochloric acid, and forming a solution with which bichloride of platinum gives a yellow precipitate.

Tests.—Loses about twenty-one per cent of its weight when exposed to a red heat. When supersaturated with nitric acid, and evaporated to dryness, the residue is almost entirely soluble in water, only a little silica remaining undissolved. It is precipitated only faintly by chloride of barium, and nitrate of silver. Eighty-seven grains require for neutralization at least ninety-eight measures of the volumetric solution of oxalic acid.

POTASSÆ CHLORAS.

CHLORATE OF POTASH.

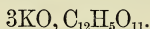


Characters.—In colourless rhomboidal crystalline plates, with a cool saline taste, sparingly soluble in cold water. It explodes when triturated with sulphur. By heat it fuses, gives off oxygen gas, and leaves a white residue, readily forming with water a neutral solution, which is precipitated white by nitrate of silver, and yellow by bichloride of platinum.

Tests.—Its solution is not affected by nitrate of silver, or oxalate of ammonia.

POTASSÆ CITRAS.

CITRATE OF POTASH.



Characters.—A white powder of saline feebly acid taste, deliquescent, and very soluble in water. Heated with sulphuric acid it forms a brown fluid, gives off an inflammable gas, and evolves the odour of acetic acid. Its solution, mixed with a solution of chloride of calcium, remains clear till it is boiled, when a white precipitate separates, readily soluble in acetic acid. Its solution, acidulated with hydrochloric acid, gives a yellow precipitate with bichloride of platinum.

Test.—102 grains heated to redness till gases cease to be evolved leave an alkaline residue, which requires for exact saturation 100 measures of the volumetric solution of oxalic acid.

POTASSÆ NITRAS.

NITRATE OF POTASH.

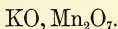


Characters.—In white opaque masses or fragments of opaque striated six-sided prisms, colourless, of a peculiar cool saline taste. Thrown on the fire it deflagrates; warmed in a test tube with sulphuric acid and copper filings it evolves ruddy fumes. Its solution acidulated with hydrochloric acid gives a yellow precipitate with bichloride of platinum.

Tests.—Its solution is not affected by chloride of barium or nitrate of silver.

POTASSÆ PERMANGANAS.

PERMANGANATE OF POTASH.



Characters.—Dark purple slender prismatic crystals, inodorous, with a sweet astringent taste, soluble in water. A single small crystal suffices to form with an ounce of water a rich purple solution, which when mixed with a little rectified spirit and heated, becomes yellowish-brown. The crystals heated to redness decrepitate, evolve oxygen gas, and leave a black residue, from which water extracts potash, recognised by its alkaline reaction, and by its giving, when acidulated with hydrochloric acid, a yellow precipitate with bichloride of platinum. •

Tests.—Entirely soluble in cold water. Five grains dissolved in water require for complete decoloration a solution of forty-four

grains of granulated sulphate of iron acidulated with two fluid drachms of dilute sulphuric acid.

Preparation.—Liquor.

POTASSÆ SULPHAS.

SULPHATE OF POTASH.

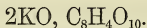


Characters.—In colourless hard six-sided prisms terminated by six-sided pyramids, which decrepitate strongly when heated, and are sparingly soluble in water. Its solution, acidulated with hydrochloric acid, is precipitated white by chloride of barium, and yellow by bichloride of platinum.

Tests.—Neutral to test paper; its solution is not affected by oxalate of ammonia.

POTASSÆ TARTRAS.

TARTRATE OF POTASH.



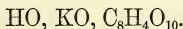
Characters.—In small colourless four or six-sided prisms. Heated with sulphuric acid it forms a black tarry fluid, evolving inflammable gas and the odour of burned sugar. Hydrochloric acid added sparingly to its solution causes the separation of a white crystalline precipitate.

Tests.—Entirely dissolved by its own weight of water. 113 grains, heated to redness till gases cease to be evolved, leave an alkaline residue, which requires for exact saturation 100 measures of the volumetric solution of oxalic acid.

POTASSÆ TARTRAS ACIDA.

ACID TARTRATE OF POTASH.

Synonym.—POTASSÆ BITARTRAS.



Characters.—A finely gritty white powder, or fragments of cakes crystallized on one surface; of a pleasant acid taste, sparingly soluble in water, insoluble in spirit. Heated in a crucible it evolves inflammable gas and the odour of burned sugar, and leaves a black residue. This effervesces with dilute hydrochloric acid, and forms a solution which when filtered gives a yellow precipitate with bichloride of platinum, and when neutralized by ammonia is rendered slightly turbid by oxalic acid.

Tests.—188 grains heated to redness till gas ceases to be evolved, leave an alkaline residue, which requires for exact saturation 100 measures of the volumetric solution of oxalic acid.

Preparations.—Confectio Sulphuris, Pulvis Jalapæ compositus.

POTASSII BROMIDUM.

BROMIDE OF POTASSIUM.



Characters.—In white transparent cubical crystals, with no odour, but a pungent saline taste, readily soluble in water, less soluble in spirit. Its watery solution gives a white crystalline precipitate with tartaric acid. When its solution in water is mixed with a little chlorine, ether agitated with it, on rising to the surface, exhibits a red colour.

Tests.—Ten grains require for complete decomposition eighty-four measures of the volumetric solution of nitrate of silver. A solution of this salt mixed with mucilage of starch and a drop of an aqueous solution of bromine does not exhibit any blue colour.

POTASSII IODIDUM.

IODIDE OF POTASSIUM.

KI.

Characters.—In colourless, generally opaque, cubic crystals, readily soluble in water, and in a less degree in spirit. It commonly has a feeble alkaline reaction; its solution mixed with mucilage of starch gives a blue colour on the addition of a minute quantity of solution of chlorine. It gives a crystalline precipitate with tartaric acid.

Tests.—The addition of tartaric acid and mucilage of starch to its watery solution does not develope a blue colour. Solution of nitrate of silver added in excess forms a yellowish-white precipitate, which, when agitated with ammonia, yields by subsidence a clear liquid in which excess of nitric acid causes no turbidity. Its aqueous solution is only faintly precipitated by the addition of lime.

Preparations.—Linimentum Iodi, Tinctura Iodi, Unguentum, Unguentum Iodi compositum.

PRUNUM.

PRUNE.

Prunus domestica Linn. The Plum. Plate 85, *Woodv.*
Med. Bot.

The dried Drupe ; from plants cultivated in southern Europe.

Characters.—About an inch long, ovate, wrinkled, black, sweet and somewhat austere.

Preparation.—Confectio Sennæ.

PTEROCARPUS.

RED SANDAL-WOOD.

Pterocarpus santalinus *Linn.* Plate 254, *Woodv. Med. Bot.*

The Wood ; from Coromandel and Ceylon.

Characters.—Dense heavy billets, outwardly dark brown, internally variegated with dark and lighter red rings, if cut transversely. Powder blood-red, of a faint peculiar odour, and an obscurely astringent taste. Also chips of the same.

QUASSIA.

QUASSIA.

Picræna excelsa *Lindl.* Plate 173, *Steph. and Church. Med. Bot. (Quassia excelsa).*

The Wood ; from Jamaica.

Characters.—Billets varying in size, seldom thicker than the

thigh. Wood dense, tough, yellowish-white, intensely and purely bitter. Also chips of the same.

Preparations.—Extractum, Infusum.

QUERCUS.

OAK BARK.

Quercus pedunculata Willd. Plate 126, *Woodv. Med. Bot.* (*Q. Robur*).

The dried Bark of the small branches and young stems; collected in spring, from plants growing in Britain.

Characters.—Covered with a greyish shining epidermis, cinnamon-coloured on the inner surface, fibrous, brittle, and strongly astringent.

Preparation.—Decoctum.

QUININÆ SULPHAS.

SULPHATE OF QUINIA.

The Sulphate of an Alkaloid, $C_{40}H_{24}N_2O_4$, HO , SO_3 + $7HO$, prepared from Yellow-Cinchona Bark, and from the bark of *Cinchona lancifolia Mutis*.

Characters.—Filiform silky snow-white crystals, of a pure intensely bitter taste, sparingly soluble in water, yet imparting to it a peculiar bluish tint. The solution gives with chloride of barium a

white precipitate insoluble in nitric acid, and when treated first with solution of chlorine and afterwards with ammonia it becomes of a splendid emerald-green colour.

Tests.—Dissolves in pure sulphuric acid with a feeble yellowish tint, and undergoes no further change of colour when gently warmed. Ten grains with ten minims of diluted sulphuric acid and half a fluid ounce of water form a perfect solution, from which ammonia throws down a white precipitate. This redissolves on agitating the whole with half a fluid ounce of pure ether, without the production of any crystalline matter floating on the lower of the two strata, into which the agitated fluid separates on rest. The upper stratum of fluid, if entirely removed by a pipette and evaporated, leaves a white residue, which, when dried in the air without heat, weighs 8·6 grains.

RESINA.

RESIN.

The Residue of the distillation of the turpentine from various species of *Pinus Linn.* and *Abies Lam.*

Characters.—Translucent, semi-opaque, yellowish, brittle, pulverizable; fracture shining; odour and taste faintly terebinthinate. It is easily fusible, and burns with a dense yellow flame and much smoke.

Preparations.—Emplastrum, Unguentum.

RHEUM.

RHUBARB.

One or more undetermined species of *Rheum Linn.*

The Root, deprived of the bark and dried; from Chinese Thibet, and Tartary.

Characters.—Trapezoidal roundish cylindrical or flattish pieces, frequently bored with one hole, yellow externally, internally marbled with fine waving greyish and reddish lines, finely gritty under the teeth; taste bitter, faintly astringent and aromatic; odour strong and very peculiar.

Tests.—Free from brown specks externally and internally, without cavities. Boracic acid does not turn the yellow exterior brown. In the powder, adulterations are detected with difficulty.

Preparations.—Extractum, Infusum, Pilula composita, Pulvis compositus, Tinctura.

RHŒAS.

RED-POPPY PETALS.

Papaver Rhœas Linn. Plate 186, *Woodv. Med. Bot.*

The Petals, dried; from indigenous plants.

Characters.—When fresh, scarlet, and of a heavy poppy odour; when dry, scentless and more dingy red.

Preparation.—Syrupus.

RICINI OLEUM. See OLEUM RICINI.

ROSA CANINA.

HIPS.

Rosa canina *Linn.* The Dog Rose. Plate 139, *Woodv. Med. Bot.*; and other allied species.

The ripe Fruit of indigenous plants, deprived of the hairy seeds (achenes).

Characters.—An inch or more in length, ovate, scarlet, smooth, shining; taste sweet, subacid, pleasant.

Preparation.—Confectio.

ROSA CENTIFOLIA.

CABBAGE-ROSE PETALS.

Rosa centifolia *Linn.* Plate 140, *Woodv. Med. Bot.*

The fresh Petals, fully expanded; from plants cultivated in Britain.

Characters.—Taste sweetish, bitter, and faintly astringent; odour roseate; both readily imparted to water.

Preparation.—Aqua.

ROSA GALLICA.

RED-ROSE PETALS.

Rosa gallica *Linn.* Plate 141, *Woodv. Med. Bot.*

The unexpanded Petals, fresh and dried ; from plants cultivated in Britain.

Characters.—Colour fine purplish-red, retained after drying ; taste bitterish, feebly acid, and astringent ; odour roseate, developed by drying.

Preparations.—Confectio, Infusum acidum, Syrupus.

ROSMARINI OLEUM. See OLEUM ROSMARINI.

RUTÆ OLEUM. See OLEUM RUTÆ.

SABADILLA.

CEVADILLA.

Asagraea officinalis *Lindl. Bot. Reg.* vol. xxv. plate 33.

The dried Fruit ; imported from Vera Cruz and Mexico.

Characters.—Fruit about half an inch long, consisting of three light-brown papyraceous follicles, each containing from one to three seeds, which are about a quarter of an inch long, blackish-brown, shining, slightly winged, possessing an intensely acrid bitter taste.

Preparation.—VERATRIA.

SABINA.

SAVIN.

Juniperus Sabina *Linn.* Plate 94, *Woodv. Med. Bot.*

The fresh and dried Tops; collected in spring, from plants cultivated in Britain.

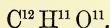
Characters.—Twigs densely covered with minute imbricated appressed leaves in four rows; odour strong, peculiar, and unpleasant; taste acrid, bitter, resinous, and disagreeable.

Preparations.—Tinctura, Unguentum.

SABINÆ OLEUM. See OLEUM SABINÆ.

SACCHARUM ALBUM.

REFINED SUGAR.



Saccharum officinarum *Linn.* Plates 33, 34, 35, *Nees, Plant. Med.*

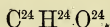
The crystallized refined Juice of the stem; from plants cultivated in the West Indies and other tropical countries.

Characters.—Compact crystalline conical loaves, snow-white, dry, scentless, and intensely and purely sweet.

Preparation.—Syrupus.

SACCHARUM LACTIS.

SUGAR OF MILK.



Crystallized Sugar, obtained from the whey of cow's milk by evaporation.

Characters.—Usually in cylindrical masses, two inches in diameter, with a cord or stick in the axis, or in fragments of cakes; greyish-white, crystalline on the surface and in its texture, translucent, hard, scentless, faintly sweet, gritty when chewed.

SAMBUCUS.

ELDER FLOWERS.

Sambucus nigra *Linn.* Plate 76, *Woodv. Med. Bot.*

The fresh Flowers; from indigenous plants.

Characters.—Flowers small, white, fragrant, crowded in large cymes.

Preparation.—Aqua.

SANTONICA.

SANTONICA.

The unexpanded Flower-heads of an undetermined species of *Artemisia* *Linn.* Imported from Russia.

Characters.—Flower-heads rather more than a line in length and nearly half a line in breadth, fusiform, blunt at each end, pale greenish-brown, smooth; resembling seeds in appearance, but consisting of imbricated involucral scales with a green midrib, enclosing four or five tubular flowers; odour strong, taste bitter, camphoraceous.

Test.—Flower-heads not round or hairy.

Preparation.—SANTONINUM.

SANTONINUM.

SANTONIN.



A crystalline neutral principle obtained from Santonica.

Characters.—Colourless flat rhombic prisms, feebly bitter, fusible and sublimable by a moderate heat; scarcely soluble in cold water, sparingly in boiling water, but abundantly in chloroform and in boiling rectified spirit. Sunlight renders it yellow.

Tests.—Not dissolved by diluted mineral acids. Entirely destructible by a red heat with free access of air.

SAPO DURUS.

HARD SOAP.

Soap made with Olive oil and Soda.

Characters.—Greyish-white, dry, inodorous; horny and pulverizable when kept in dry warm air; easily moulded when heated.

Tests. — Entirely soluble in rectified spirit; not imparting an oily stain to paper.

Preparations. — Emplastrum, Linimentum, Linimentum Opii.

SAPO MOLLIS.

SOFT SOAP.

Soap made with Olive oil and Potash.

Characters. — Yellowish-white, inodorous, of the consistence of thick honey.

Tests. — Entirely soluble in rectified spirit; not imparting an oily stain to paper.

SARSA.

JAMAICA SARSAPARILLA.

Smilax officinalis *Humb. and Bonpl.*

The dried Root; native of Central America, imported from Jamaica.

Characters. — Roots not thicker than a goose-quill, generally many feet in length, reddish-brown, covered with rootlets, and folded in bundles about eighteen inches long, scentless; taste mucilaginous, feebly bitterish, faintly acrid.

Preparations. — Decoctum, Decoctum compositum, Extractum liquidum.

SASSAFRAS.

SASSAFRAS.

Sassafras officinale Nees, *Laurineæ*. Plate 31, *Woodv. Med. Bot.* (*Laurus Sassafras*).

The dried Root; from North America.

Characters.—In branched pieces, sometimes eight inches in diameter at the crown; bark externally greyish-brown, internally rusty-brown, of an agreeable odour, and a peculiar aromatic warm taste; wood light, porous, greyish-yellow, more feeble in odour and taste than the bark. Also in chips.

Preparation.—Decoctum Sarsæ compositum.

SCAMMONIÆ RADIX.

SCAMMONY ROOT.

Convolvulus Scammonia Linn. Plate 5, *Woodv. Med. Bot.*

The dried Root; from Syria.

Characters.—Tap-shaped roots, sometimes three inches in diameter at the top, brown without, white within, slightly odorous but tasteless. Ether agitated with the powder and evaporated leaves a residue having the properties of Scammony resin.

Preparation.—Resina.

SCAMMONIÆ RESINA.

RESIN OF SCAMMONY.

A Resin, obtained by means of rectified spirit from Scammony root or Scammony.

Characters.—In brownish translucent pieces, brittle, resinous in fracture, of a sweet fragrant odour if prepared from the root.

Tests.—It cannot form singly an emulsion with water. Its tincture does not render the fresh-cut surface of a potato blue. Ether dissolves it entirely.

Preparations.—Confectio, Extractum Colocynthis compositum, Mistura.

SCAMMONTIUM.

SCAMMONY.

Convolvulus Scammonia Linn.

A Gum-resin, obtained by incision from the living root in Syria.

Characters.—Ash-grey and rough externally; fresh fracture resinous, splintery, shining, black when dry; odour and flavour cheesy; causes, when chewed, a slight prickly sensation in the back of the throat; easily triturated into a dirty-grey powder, and converted with water into a smooth emulsion.

Tests.—It does not effervesce with hydrochloric acid. Boiling water agitated with the powder, cooled and filtered, does not strike a blue colour with tincture of iodine. Ether removes from 80 to

90 per cent of resin; and what remains is chiefly soluble gum, with a little moisture.

Preparations. — Confectio, Extractum Colocynthis compositum, Mistura, Pilula Colocynthis composita, Pilula Colocynthis et Hyoscyami, Pulvis compositus, Resina.

SCILLA.

SQUILL.

Urginea Scilla *Steinheil.* Plate 118, *Woodv. Med. Bot.*

The Bulb, from the Mediterranean coasts, sliced and dried.

Characters. — Bulb pear-shaped, weighing from half a pound to four pounds; outer scales membranous, brownish-red or white; inner scales thick, whitish, fleshy, juicy; taste mucilaginous, intensely and disagreeably bitter, somewhat acrid. The dried slices are white or yellowish-white, slightly translucent, scentless, disagreeably bitter, brittle and easily pulverizable if very dry, but, if exposed, readily recovering moisture and flexibility.

Preparations. — Pilula composita, Syrupus, Tinctura.

SCOPARIUS.

BROOM TOPS.

Sarothamnus Scoparius *Wimmer.* Plate 89, *Woodv. Med. Bot. (Spartium Scoparium).*

The Tops, fresh and dried; from indigenous plants.

Characters.—Straight angular dark green smooth tough twigs, of a bitter nauseous taste, and of a peculiar odour when bruised.

Preparations.—Decoctum, Succus.

SENEGA.

SENEGA.

Polygala Senega Linn. Plate 103, *Steph. and Church. Med. Bot.*

The dried Root ; from North America.

Characters.—A knobby root-stock, with a branched tap-root, of about the thickness of a quill, twisted and keeled ; bark yellowish-brown, sweetish, afterwards pungent, causing salivation ; interior woody, tasteless, inert.

Preparations.—Infusum, Tinctura.

SENNA ALEXANDRINA.

ALEXANDRIAN SENNA.

Cassia lanceolata Lamarck, *Encyc.*, Plate 345, *Nees, Plant. Med.* ; and *Cassia obovata* Colladon, Plates 347 and 348 (*C. Senna*), *Nees, Plant. Med.*

The Leaves, imported from Alexandria ; carefully freed from the flowers, pods, and leafstalks of the same, and from the leaves, flowers, and fruit of *Solenostemma Arghel Heyne*.

Characters.—Lanceolate or obovate leaflets, about an inch long, unequally oblique at the base, brittle, greyish-green, of a faint peculiar odour, and mucilaginous sweetish taste.

Tests.—The unequally oblique base, and freedom from bitterness, distinguish the Senna from the Arghel leaves, which are also thicker, stiffer, greyer, and more wrinkled.

Preparations.—Confectio, Infusum, Syrupus, Tinctura.

SENNA INDICA.

TINNIVELLY SENNA.

Cassia elongata Lemaire. Plate 37, *Royle, Bot. Himal.*

The Leaves; from plants cultivated in Southern India.

Characters.—About two inches long, lanceolate, acute, unequally oblique at the base, flexible, entire, green, without any admixture; odour and taste those of Alexandrian Senna.

Preparations.—Confectio, Infusum, Syrupus, Tinctura.

SERPENTARIA.

SERPENTARY.

Aristolochia Serpentaria Linn. Plate 180, *Steph. and Church. Med. Bot.*

The dried Root; from the southern parts of North America.

Characters.—A small roundish root-stock, with a tuft of numerous

slender radicles, about three inches long, yellowish, of an agreeable camphoraceous odour, and a warm bitter camphoraceous taste.

Preparations.—Infusum, Tinctura.

SEVUM PRÆPARATUM.

PREPARED SUET.

Ovis Aries Linn. The Sheep.

The internal Fat of the abdomen purified by melting and straining.

Characters.—White, soft, smooth, almost scentless; fusible at 103°.

SINAPIS.

MUSTARD.

Sinapis nigra Linn. and *Sinapis alba Linn.* Black Mustard, White Mustard. Plates 969 and 1677, *Eng. Bot.*

The Seeds, reduced to powder mixed; cultivated in England.

Characters.—Greenish-yellow, of an acrid bitterish oily pungent taste, scentless when dry, but exhaling when moist a pungent penetrating peculiar odour, very irritating to the nostrils and eyes.

Test.—A decoction cooled is not made blue by tincture of iodine.

Preparation.—Cataplasma.

SODA CAUSTICA.

CAUSTIC SODA.

Hydrate of Soda, NaO , HO .

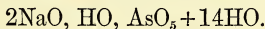
Characters.—In hard greyish-white fragments of cakes, very alkaline and corrosive. It imparts a yellow colour to flame, and its solution in water acidulated by nitric acid gives scanty white precipitates with nitrate of silver and chloride of barium.

Tests.—Forty grains dissolved in water leave scarcely any sediment, and require for neutralization about ninety measures of the volumetric solution of oxalic acid.

Preparation.—Liquor.

SODÆ ARSENIAS.

ARSENIATE OF SODA.



Characters.—In colourless transparent prisms, soluble in water; the solution alkaline, giving white precipitates with chloride of barium, chloride of calcium, and sulphate of zinc, and a brick-red precipitate with nitrate of silver, all of which are soluble in nitric acid.

Tests.—Heated to 300° it loses 40.38 per cent of its weight. A watery solution of ten grains of the residue, treated with 5.3 measures of the volumetric solution of soda, continues to give a precipitate with the volumetric solution of nitrate of silver until 161.3 measures of the latter have been added.

SODÆ BICARBONAS.

BICARBONATE OF SODA.

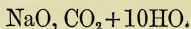


Characters.—In powder or small opaque irregular scales, white, of a saline not unpleasant taste. Imparts a yellow colour to flame. Dissolves with much effervescence in diluted hydrochloric acid, forming a solution in which bichloride of platinum causes no precipitate. It loses a portion of its carbonic acid at 212° .

Tests.—When supersaturated with nitric acid its solution scarcely precipitates with chloride of barium or nitrate of silver. Eighty-four grains exposed to a red heat leave fifty-three of an alkaline residue, which requires for neutralization one hundred measures of the volumetric solution of oxalic acid.

SODÆ CARBONAS.

CARBONATE OF SODA.



Characters.—In transparent colourless laminar crystals of a rhombic shape, efflorescent, with a harsh alkaline taste and strong alkaline reaction. It imparts a yellow colour to flame, and dissolves with effervescence in diluted hydrochloric acid, forming a solution which does not precipitate with bichloride of platinum. By heat it undergoes aqueous fusion, and loses sixty-three per cent of its weight.

Tests.—When supersaturated with nitric acid it precipitates only

slightly or not at all with chloride of barium or nitrate of silver. One hundred and forty-three grains require for neutralization at least ninety-six measures of the standard solution of oxalic acid.

Preparation.—Sodæ Carbonas exsiccata.

SODÆ CHLORATÆ LIQUOR.

SOLUTION OF CHLORINATED SODA.

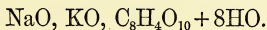
A mixed Solution of Hypochlorite of Soda, NaO, ClO, Chloride of Sodium, and Bicarbonate of Soda.

Characters.—A colourless alkaline liquid, with astringent taste and feeble odour of chlorine. It decolorizes sulphate of indigo. It effervesces with hydrochloric acid, evolving chlorine and carbonic acid, and forming a solution which does not precipitate with bichloride of platinum.

Tests.—Specific gravity 1.103. One fluid drachm, added to a solution of twenty grains of iodide of potassium in four fluid ounces of water and acidulated with two fluid drachms of hydrochloric acid, requires for the discharge of the brown colour which the mixture assumes, forty-three measures of the volumetric solution of hyposulphite of soda. It is not precipitated by oxalate of ammonia.

SODÆ ET POTASSÆ TARTRAS.

TARTRATE OF SODA AND POTASH.



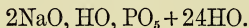
Characters.—In colourless transparent prisms or halves of prisms of the right rhombic order, generally eight-sided; tasting like common

salt. Heated with sulphuric acid it blackens, evolving inflammable gases and the odour of burnt sugar. It imparts a yellow colour to flame. A strong solution gives a crystalline precipitate with a small quantity of dilute sulphuric acid.

Tests.—Entirely soluble in cold water. Forty-seven grains heated to redness till gases cease to be evolved, leave an alkaline residue which requires for neutralization thirty measures of the volumetric solution of oxalic acid.

SODÆ PHOSPHAS.

PHOSPHATE OF SODA.



Characters.—In transparent colourless rhombic prisms, terminated by four converging planes, efflorescent, tasting like common salt. It imparts a yellow colour to flame. Its solution gives a yellow precipitate with nitrate of silver, the resulting fluid acquiring an acid reaction.

Test.—Heated to dull redness it loses sixty-three per cent of its weight, leaving a residue, which, when dissolved in water, gives with chloride of barium a precipitate entirely soluble in dilute nitric acid.

SODII CHLORIDUM.

SALT.



Characters.—In small white crystalline grains, or transparent cubic crystals, with a purely saline taste, imparting a yellow colour

to flame, soluble in water. The solution is not precipitated by bichloride of platinum, but gives with nitrate of silver a white precipitate soluble in ammonia but insoluble in nitric acid.

Tests.—Free from moisture. The solution is not rendered hazy by chloride of barium nor by phosphate of soda after the addition of a mixed solution of ammonia and hydrochlorate of ammonia.

SPIRITUS ÆTHERIS NITROSI. See ÆTHERIS NITROSI SPIRITUS.

SPIRITUS PYROXYLICUS RECTIFICATUS.

RECTIFIED PYROXYLIC SPIRIT.

Hydrated Oxide of Methyle, C_2H_3O , HO, with about ten per cent of water; a product of the destructive distillation of wood.

Characters.—Colourless, mobile and inflammable, burning with a pale blue flame, having a spirituous odour and a warm ethereal taste with a peculiar after taste.

Tests.—Specific gravity 0·841 to 0·846. Without action on litmus paper, free from smoky taste. Is not rendered turbid by mixture with water.

SPIRITUS RECTIFICATUS.

RECTIFIED SPIRIT.

Alcohol, C_4H_5O , HO, with sixteen per cent of water; obtained by the distillation of fermented saccharine

fluids, and by the rectification of the product, if it be not of the proper density.

Characters.—Colourless, transparent, very mobile and inflammable, of a peculiar pleasant odour, and a strong spirituous burning taste. Burns with a blue flame without smoke.

Tests.—Specific gravity 0·838. Remains clear when diluted with distilled water. Odour and taste purely alcoholic. Four fluid ounces with three measures of the volumetric solution of nitrate of silver exposed for twenty-four hours to bright light, and then decanted from the black powder which has formed, undergoes no further change when again exposed to light with more of the test.

Preparation.—Spiritus tenuior.

STRAMONII FOLIA.

STRAMONIUM LEAVES.

Datura Stramonium Linn. Thorn Apple. Plate 124,
Woodv. Med. Bot.

The Leaves dried; collected from plants cultivated in Britain, when they are in flower.

Characters.—Large, ovate, sinuous, deeply cut; of a heavy odour strongest while they are drying, and of a mawkish faintly bitter nauseous taste.

STRAMONII SEMINA.

STRAMONIUM SEEDS.

Datura Stramonium Linn.

The ripe Seeds.

Characters.—Brownish-black, reniform, flat, rough, in taste feebly bitter and mawkish; inodorous unless bruised, when they emit a peculiar heavy odour.

Preparations.—Extractum, Tinctura.

STRYCHNIA.

STRYCHNIA.

An Alkaloid, $C_{42}H_{22}N_2O_4$, obtained from *Nux Vomica*.

Characters.—In right square octahedrons or prisms, colourless and inodorous; sparingly soluble in water, but communicating to it its intensely bitter taste; soluble in boiling rectified spirit, in ether, and in chloroform. Pure sulphuric acid forms with it a colourless solution, which on the addition of bichromate of potash acquires an intensely violet hue, speedily passing through red to yellow. A very active poison.

Tests.—Not coloured by nitric or sulphuric acid; leaves no ash when burned with free access of air.

Preparation.—Liquor.

STYRAX PRÆPARATUS.

PREPARED STORAX.

Liquidambar orientale *Miller's Dict.* Plate, *Pharm. Journ.* vol. xvi. page 462.

A Balsam, obtained from the bark in Asia Minor, purified by means of rectified spirit and straining.

Characters.—A semitransparent brownish-yellow semifluid resin, of the consistence of thick honey, with a strong agreeable fragrance and aromatic bland taste. Heated in a test tube on the vapour bath, it becomes more liquid but gives off no moisture; boiled with solution of bichromate of potash and sulphuric acid it evolves the odour of hydride of benzule.

Preparation.—Tinctura Benzoini composita.

SULPHUR PRÆCIPITATUM.

PRECIPITATED SULPHUR.

Characters.—A greyish-yellow soft powder free from grittiness, and with no smell of sulphuretted hydrogen. When heated in an open vessel, it burns with a blue flame and the evolution of sulphurous acid.

Tests.—Entirely volatilized by heat; under the microscope it is seen to consist of opaque globules without any admixture of crystalline matter. Otherwise corresponds with sublimed sulphur.

SULPHUR SUBLIMATUM.

SUBLIMED SULPHUR.

Characters.—A slightly gritty powder of a fine greenish-yellow colour; without taste, and without odour unless heated; burning in open vessels with a blue flame and the evolution of sulphurous acid.

Tests.—Entirely volatilized by heat; does not redden moistened litmus paper. Solution of ammonia agitated with it, and filtered, does not on evaporation leave any residue.

Preparations.—Confectio, Unguentum.

TABACUM.

LEAF TOBACCO.

Nicotiana Tabacum Linn. Virginian Tobacco. Plate 37, *Steph. and Church. Med. Bot.*

The dried Leaves; cultivated in America.

Characters.—Large mottled-brown ovate or lanceolate acuminate leaves, bearing numerous short glandular hairs; having a peculiar heavy odour and nauseous-bitter acrid taste; yielding, when distilled with solution of potash, an alkaline fluid, which has the peculiar odour of nicotine, and precipitates with bichloride of platinum and tincture of galls.

Test.—Not manufactured.

Preparation.—Enema.

TAMARINDUS.

TAMARIND.

Tamarindus indica *Linn.* Plate 166, *Woodv. Med. Bot.*

The preserved Pulp of the fruit ; imported from the West Indies.

Characters.—A brown sweetish subacid pulp preserved in sugar, containing strong fibres, and brown shining seeds each enclosed in a membranous coat.

Test.—A piece of bright iron, left in contact with the pulp for an hour, does not exhibit any deposit of copper.

Preparation.—Confectio Sennæ.

TARAXACUM.

DANDELION ROOT.

Taraxacum Dens Leonis *DC.* Plate 3, *Woodv. Med. Bot.*

The fresh Roots ; gathered between September and February, from meadows and pastures in Britain.

Characters.—Tap-shaped roots, smooth and dark-brown externally, white within, easily broken, and giving out an inodorous bitter milky juice, which becomes pale-brown by exposure.

Tests.—Not wrinkled or pale-coloured externally ; juice not watery ; any adherent leaves runcinate and quite smooth.

Preparations.—Decoctum, Extractum, Succus.

TEREBINTHINA CANADENSIS.

CANADA BALSAM.

Abies balsamea Aiton, *Hort. Kew.* Balm of Gilead Fir. Plate 31, *Lambert, Pinus* (*Pinus balsamea*).

The Turpentine, obtained from the stem by incision, in Canada.

Characters.—A pale-yellow ductile oleo-resin, of the consistence of thin honey, with a peculiar agreeable odour, and a slightly bitter feebly acrid taste; by exposure drying very slowly into a transparent adhesive varnish; solidifying when mixed with a sixth of its weight of magnesia.

TEREBINTHINÆ OLEUM. See OLEUM TERE-
BINTHINÆ.

THERIACA.

TREACLE.

The uncrystallized Residue of the refining of sugar.

Characters.—A thick brown fermentable syrup, very sweet; not crystallizing by rest or evaporation. Specific gravity about 1.40.

Test.—Nearly free from empyreumatic odour or flavour.

THUS AMERICANUM.

COMMON FRANKINCENSE.

Pinus Tæda Linn. the Frankincense Pine, and *Pinus palustris Miller's Dict.* the Swamp Pine. Plates 16, 17, and 20, *Lambert, Pinus.*

The concrete Turpentine, from the Southern States of North America.

Characters.—A softish bright-yellow opaque solid, resinous but tough, having the odour of American Turpentine.

Preparation.—Emplastrum Picis.

TRAGACANTHA.

TRAGACANTH.

Astragalus verus Olivier, Voy., DC. Plate 329, *Nees, Plant. Med.*; and possibly other species.

A Gummy Exudation from the stem; collected in Asia Minor.

Characters.—White or yellowish, in broad shell-like slightly curved plates, tough and elastic, but rendered more pulverizable by a heat of 120° Fahr.; very sparingly soluble in cold water; but swelling into a gelatinous mass, which is tinged violet by tincture of iodine.

Tests.—After maceration in cold water, the fluid portion is not precipitated by the addition of rectified spirit, and the gelatinous mass is not turned deep blue by tincture of iodine.

Preparations.—Pulvis compositus, Mucilago.

ULMUS.

ELM BARK.

Ulmus campestris Linn. Broad-leaved Elm. Plate 197, *Woodv. Med. Bot.*

The dried inner Bark, deprived of its outer layers; from trees indigenous to and cultivated in Britain.

Characters.—A tough brownish-yellow bark, about half a line thick, without smell; taste mucilaginous, slightly bitter, and astringent. Its decoction is turned green by perchloride of iron, and precipitates with a solution of gelatine.

UVA URSI.

BEARBERRY LEAVES.

Arctostaphylos Uva Ursi Spreng. Syst. Plate 70, *Woodv. Med. Bot. (Arbutus Uva Ursi).*

The dried Leaves from indigenous plants.

Characters.—Obovate entire coriaceous shining leaves, about three fourths of an inch in length, reticulated beneath; with a strong astringent taste, and a feeble hay-like odour when powdered; the infusion giving a bluish-black precipitate with perchloride of iron.

Test.—Leaves not dotted beneath nor toothed on the margin.

Preparation.—Infusum.

UVÆ.

RAISINS.

Vitis vinifera *Linn.* The Grape Vine. Plate 195, *Woodv. Med. Bot.*

The ripe Fruit, dried in the sun or with artificial heat; imported from Spain.

Characters.—Fruits shrivelled and compressed, smooth, and free from sugary or saline incrustation, agreeably fragrant; pulp soft, very sweet.

VALERIANA.

VALERIAN.

Valeriana officinalis *Linn.* Plate 96, *Woodv. Med. Bot.*

The Root, of plants indigenous to and also cultivated in Britain, collected in Autumn and dried; that from wild plants growing on dry soil being preferred.

Characters.—A short yellowish-white rhizome, with numerous fibrous roots about two or three inches long; of a bitter taste and penetrating odour, agreeable in the recent root, becoming fetid by keeping; yielding volatile oil and valerianic acid when distilled with water.

Preparations.—Infusum, Tinctura, Tinctura ammoniata.

VERATRIA.

VERATRIA.

An Alkaloid, $C_{64}H_{52}N_2O_{16}$, obtained from Cevadilla; not quite pure.

Characters.—Pale grey, amorphous, without smell, but, even in the most minute quantity, powerfully irritating the nostrils; strongly and persistently bitter, and highly acrid; insoluble in water, sparingly soluble in spirit and ether, but readily in diluted acids, leaving traces of an insoluble brown resinoid matter. An active poison.

Tests.—Heated with access of air it melts into a yellow liquid, and at length burns away, leaving no residue.

Preparation.—Unguentum.

VINUM XERICUM.

SHERRY.

A Spanish Wine.

Characters.—Pale yellowish-brown; containing about seventeen or eighteen per cent of alcohol.

ZINCI ACETAS.

ACETATE OF ZINC.



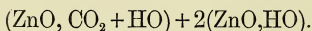
Characters.—Thin translucent and colourless crystalline plates, of a pearly lustre, with a sharp unpleasant taste, soluble in water;

completely precipitated pure white by sulphuretted hydrogen; evolving acetic acid when decomposed by sulphuric acid.

Tests.—A dilute watery solution is not affected by chloride of barium or nitrate of silver; and, when slightly acidulated with hydrochloric acid, is not precipitated by sulphuretted hydrogen. After it has been boiled for a few minutes with a little nitric acid, it yields with ammonia a white precipitate entirely soluble without colour in an excess of the reagent.

ZINCI CARBONAS.

CARBONATE OF ZINC.



Characters.—White, tasteless, inodorous, insoluble in water; soluble, with effervescence and without residue, in diluted sulphuric acid, forming a solution which gives a white precipitate with hydrosulphuret of ammonia.

Tests.—Its solution in dilute nitric acid is not precipitated by chloride of barium or nitrate of silver, and gives with carbonate of ammonia a white precipitate entirely soluble without colour in an excess of the reagent.

ZINCI CHLORIDUM.

CHLORIDE OF ZINC.



Characters.—Colourless opaque rods or tablets, very deliquescent and caustic; soluble almost entirely in water, alcohol, and ether. The watery solution is precipitated white by hydrosulphuret of

ammonia and nitrate of silver; but, if first acidulated with hydrochloric acid, it is not affected by sulphuretted hydrogen.

Tests.—Its watery solution is not affected by chloride of barium or oxalate of ammonia, and is not tinged blue by the ferrocyanide or ferridcyanide of potassium. Ammonia throws down a white precipitate entirely soluble in an excess of the reagent.

Preparation.—Liquor.

ZINCI OXIDUM.

OXIDE OF ZINC.



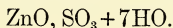
Characters.—A soft white tasteless and inodorous powder, becoming pale-yellow when heated; and forming with diluted sulphuric acid a solution which gives a white precipitate with hydrosulphuret of ammonia.

Tests.—Dissolves without effervescence in diluted nitric acid, forming a solution, which is not affected by chloride of barium or nitrate of silver, and gives with carbonate of ammonia a white precipitate which dissolves entirely without colour in an excess of the reagent.

Preparation.—Unguentum.

ZINCI SULPHAS.

SULPHATE OF ZINC.



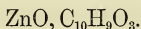
Characters.—In colourless transparent prismatic crystals, with a strong metallic styptic taste. Its solution in water gives white

precipitates with chloride of barium and hydrosulphuret of ammonia.

Tests.—Its watery solution is not tinged purple by tincture of galls; and when acidulated with sulphuric or hydrochloric acid gives no precipitate with sulphuretted hydrogen. After it has been boiled for a few minutes with a little nitric acid, it yields with ammonia a white precipitate which is entirely soluble without colour in an excess of the reagent.

ZINCI VALERIANAS.

VALERIANATE OF ZINC.



Characters.—In brilliant white pearly tabular crystals, with a feeble odour of valerianic acid, and a metallic taste; scarcely soluble in cold water or in ether, soluble in hot water and alcohol. Heated to redness in an open crucible it leaves a residue which, when dissolved in dilute sulphuric acid, gives a white precipitate with hydrosulphuret of ammonia.

Tests.—Its solution in hot water is not precipitated by chloride of barium. It gives when heated with dilute sulphuric acid a distillate, which, when mixed with the solution of acetate of copper, does not immediately affect the transparency of the fluid, but forms after a little time oily drops, which gradually pass into a bluish-white crystalline deposit.

ZINGIBER.

GINGER.

Zingiber officinale *Roscoe, Trans. Linn. Soc.* Plate 11, *Woodv. Med. Bot. (Amomum Zingiber)*.

The Rhizome, scraped and dried; from plants cultivated in the West Indies, India, and other countries.

Characters.—Irregular lobed decorticated pieces, three or four inches long, subcompressed, yellowish-white but not chalky on the surface, with a short mealy fracture, hot taste, and agreeable aroma. Powder yellowish-white.

Preparations.—Syrupus, Tinctura.

PART II.



PREPARATIONS AND COMPOUNDS.

PREPARATIONS AND COMPOUNDS.

ACIDUM ACETICUM DILUTUM.

DILUTE ACETIC ACID.

Take of Acetic Acid, one pint ;
Distilled Water, seven pints.

Mix.

Tests.—Specific gravity 1·006. One fluid ounce requires for neutralization 31 measures of the volumetric solution of soda.

ACIDUM ACETICUM GLACIALE.

GLACIAL ACETIC ACID.

Take of Acetate of Soda, twenty ounces ;
Sulphuric Acid, eight fluid ounces.

Place the Acetate of Soda in a porcelain basin on a moderately warm sand bath, apply heat till it liquefies, and continuing the heat stir until the salt becomes

pulverulent ; let the heat be now raised so as to produce fusion, and then instantly remove the salt from the fire. As soon as it has cooled break up the mass, and place it in a stoppered retort capable of holding three pints, and connected with a Liebig's condenser. Pour the Sulphuric Acid on the salt, quickly replace the stopper, and when the distillation of Acetic Acid begins to slacken continue it with the aid of heat until six fluid ounces have passed over. Mix one fluid drachm of the acetic acid thus obtained with a fluid drachm of the solution of iodate of potash previously mixed with a little mucilage of starch ; and, if it gives rise to a blue colour, agitate the whole product of distillation with a quarter of an ounce of black oxide of manganese perfectly dry and in fine powder, and redistil.

ACIDUM ARSENIOSUM.

ARSENIOUS ACID.

Take of Arsenious Acid of Commerce, one hundred grains.

Introduce the Commercial Arsenious Acid into a thin porcelain capsule of a circular shape ; and, having covered this as accurately as possible with a glass flask filled with cold water, apply the heat of a gas lamp. Sublimed Arsenious Acid will be found adhering to the bottom of the flask.

Should a larger quantity be required, the Commercial Arsenious Acid should be sublimed, by the heat of a gas lamp or of burning charcoal, from a small Florence flask, the neck of which is passed into a second flask of larger size; and the flask containing the commercial arsenious acid should be furnished with a hood of sheet iron to counteract the cooling influence of the atmosphere.

These processes should be conducted in the vicinity of a flue with a good draught, so as to carry off any vapours of arsenious acid which may escape.

ACIDUM BENZOICUM.

BENZOIC ACID.

Take of Benzoin, four ounces.

Place the Benzoin in a cylindrical pot of sheet iron, furnished with a flange at its mouth; and, having fitted the pot into a circular hole in a sheet of pasteboard, interpose between the pasteboard and flange a collar of tow, so as to produce a nearly air-tight junction. Let a cylinder of stiff paper open at one end, eighteen inches high, and having a diameter of at least twice that of the pot, be now inverted on the pasteboard, and secured to it by slips of paper and flour paste. Pass two inches of the lower part of the pot through a hole in a plate of sheet tin, which is to be kept from

contact with the pasteboard by the interposition of a few corks; and let a heat just sufficient to melt the benzoin (that of a gas lamp answers well) be applied, and continued for at least six hours, that Benzoic Acid may be sublimed. Let the product thus obtained, if not quite white, be pressed firmly between folds of filtering paper, and again sublimed.

ACIDUM CITRICUM.

CITRIC ACID.

Take of Lemon Juice, four pints;

Beer Yeast, two fluid ounces;

Prepared Chalk, four ounces and a half:

Sulphuric Acid, two fluid ounces and three fluid drachms;

Distilled Water, a sufficiency.

Mix the Lemon Juice with the Yeast, and let it stand for two days, at a temperature between 60° and 70°. When fermentation has ceased, separate the clear liquid from the lees, boil it, and while hot add the Chalk by degrees till there is no more effervescence. Collect the deposit on a calico filter, and wash it with hot water till the filtered liquor passes from it colourless. Mix the deposit with two pints of Distilled Water, and gradually add the Sulphuric Acid previously diluted with a pint and a half of Distilled

Water, applying for half an hour sufficient heat to produce ebullition, and constantly stirring. Separate the acid solution by filtration, wash the insoluble matter with cold Distilled Water, and add the washings to the solution. Concentrate to the density of 1.21, cool, and after twenty-four hours decant the liquor from the crystals of sulphate of lime which have formed; concentrate further till a film forms on its surface, and set it aside to cool and crystallize. Purify the crystals if necessary by a second crystallization.

ACIDUM GALLICUM.

GALLIC ACID.

Take of Galls, in coarse powder, one pound;
Distilled Water, a sufficiency.

Place the Galls in a porcelain dish, pour on as much of the Water as will convert them into a thick paste, and keep them in this moistened condition for six weeks, at a temperature of between 60° and 70°, adding Distilled Water from time to time to supply what is lost by evaporation. At the end of that time boil the paste for twenty minutes with forty-five fluid ounces of the Water, strain through calico, and when the fluid has cooled collect on a filter the crystalline deposit which has formed and let it drain. Press it strongly between folds of filtering paper, and redissolve

in ten ounces of boiling Distilled Water. When the fluid has cooled to 80° pour it off from the crystals which have formed, wash these with three ounces of ice-cold Distilled Water, and dry them, first by filtering paper, and finally by a temperature not exceeding 212° .

By boiling the undissolved portion of the galls with forty-five additional ounces of water, filtering into a capsule containing the liquor decanted from the crystals in the preceding process, evaporating to the bulk of ten ounces, and cooling to 80° , an additional quantity of acid may be obtained, which however is usually a little darker in colour than the product of the previous crystallization.

ACIDUM HYDROCHLORICUM.

HYDROCHLORIC ACID.

Take of Chloride of Sodium, dried, three pounds ;
Sulphuric Acid, forty-four fluid ounces ;
Water, thirty-six fluid ounces ;
Distilled Water, fifty fluid ounces.

Dilute the Sulphuric Acid with thirty-two ounces of the Water, and when the mixture has cooled pour it upon the Chloride of Sodium previously introduced into a flask having the capacity of at least one gallon. Connect the flask by corks and a bent glass tube with a three-necked bottle, furnished with a safety tube,

and containing the remaining four ounces of the Water; then, applying heat, conduct the gas into a second bottle containing the Distilled Water, by means of a bent tube dipping about half an inch below its surface; and let the process be continued, until the product measures sixty-eight ounces. The bottle containing the distilled water must be carefully kept cool during the whole operation.

ACIDUM HYDROCHLORICUM DILUTUM.

DILUTE HYDROCHLORIC ACID.

Take of Hydrochloric Acid, three fluid ounces;
Distilled Water, eight fluid ounces.

Mix, and preserve in a stoppered bottle.

Tests.—Specific gravity 1·05. Six fluid drachms require for neutralization 99 measures of the volumetric solution of soda.

ACIDUM HYDROCYANICUM DILUTUM.

DILUTE HYDROCYANIC ACID.

Take of Ferrocyanide of Potassium, two ounces and a quarter;
Sulphuric Acid, seven fluid drachms;
Distilled Water, thirty fluid ounces, or a sufficiency.

Dissolve the Ferrocyanide of Potassium in ten ounces of the Water, then add the Sulphuric Acid previously diluted with four ounces of the Water and cooled. Put them into a retort, and adapt this to a receiver containing eight ounces of the Water, which must be kept carefully cold. Distil with a gentle heat by the aid of a sand bath until the fluid in the receiver measures seventeen ounces. Add to this three ounces of the Water, or as much as may be sufficient to bring the acid to the required strength of two per cent.

ACIDUM NITRICUM.

NITRIC ACID.

Take of Nitrate of Potash, two pounds ;
Sulphuric Acid, seventeen fluid ounces.

Pour the Sulphuric Acid upon the Nitrate of Potash previously introduced into a plain retort ; pass the neck of the retort at least five inches into the glass tube of a Liebig's condenser, and distil over the acid with a heat which towards the end of the process must be raised so as to liquefy the contents of the retort.

ACIDUM NITRICUM DILUTUM.

DILUTE NITRIC ACID.

Take of Nitric Acid, two fluid ounces ;
Distilled Water, thirteen fluid ounces.

Mix, and preserve in a stoppered bottle.

Tests.—Colourless. Specific gravity 1·101. Six fluid drachms require for neutralization 100 measures of the volumetric solution of soda.

ACIDUM NITRO-HYDROCHLORICUM DILUTUM.

DILUTE NITRO-HYDROCHLORIC ACID.

Take of Nitric Acid, two fluid ounces ;
Hydrochloric Acid, four fluid ounces ;
Distilled Water, twenty-six fluid ounces.

Add to the Water first the Nitric, and then the Hydrochloric Acid. Mix, and preserve in a stoppered bottle.

Tests.—Specific gravity 1·074. Six fluid drachms require for neutralization 93·88 measures of the volumetric solution of soda.

ACIDUM PHOSPHORICUM DILUTUM.

DILUTE PHOSPHORIC ACID.

Take of Phosphorus, four hundred and thirteen grains;

Nitric Acid, four fluid ounces ;

Distilled Water, one pint, or a sufficiency.

Place the Nitric Acid diluted with ten ounces of the Water in a tubulated retort connected with a Liebig's condenser, and, having added the Phosphorus, apply a very gentle heat until five fluid ounces of liquid have distilled over. Return this to the retort, and renew and continue the distillation until the phosphorus has entirely dissolved. Transfer the contents of the retort to a porcelain capsule, and evaporate the liquid, raising the heat a little towards the close of the process, until bubbles of orange vapour cease to form, and a colourless liquid of syrupy consistence is obtained. Dissolve this when cool in such an amount of Distilled Water, that the volume shall become one pint.

ACIDUM SULPHURICUM.

SULPHURIC ACID.

Take of Sulphuric Acid of Commerce, twelve fluid ounces ;

Sulphate of Ammonia, in powder, a quarter of an ounce.

Having added the Sulphate of Ammonia to the Sulphuric Acid, introduce the mixture into a plain retort with a few slips of platinum foil, cover the upper part of the body of the retort with a sheet-iron hood, and distil over one tenth of the acid into a flask. Remove this flask, and reject its contents ; and, having applied a fresh flask, continue the distillation till only a fluid ounce of liquid remains behind. Preserve the product in a stoppered bottle.

ACIDUM SULPHURICUM AROMATICUM.

AROMATIC SULPHURIC ACID.

Take of Sulphuric Acid, three fluid ounces ;

Rectified Spirit, two pints, or a sufficiency ;

Cinnamon, in coarse powder, two ounces ;

Ginger, in coarse powder, one ounce and a quarter.

Mix the Sulphuric Acid gradually with thirty-five

ounces of the Spirit, then add the Cinnamon and the Ginger, and digest for seven days, agitating frequently. Filter, and add sufficient Rectified Spirit to make up the bulk of two pints.

Tests.—Specific gravity 0·935. Six fluid drachms require for neutralization 84·75 measures of the volumetric solution of soda.

ACIDUM SULPHURICUM DILUTUM.

DILUTE SULPHURIC ACID.

Take of Sulphuric Acid, three fluid ounces ;
Distilled Water, thirty-five fluid ounces.

Mix gradually the Sulphuric Acid and the Water, and preserve the product in a stoppered bottle.

Tests.—Specific gravity 1·087. Six fluid drachms require for neutralization 100 measures of the volumetric solution of soda.

ACIDUM SULPHUROSUM.

SULPHUROUS ACID.

Take of Sulphuric Acid, four fluid ounces ;
Wood Charcoal, recently burned, dry, and
in coarse powder, one ounce ;
Water, two fluid ounces ;
Distilled Water, twenty fluid ounces.

Put the Charcoal and the Sulphuric acid into a

glass flask ; heat by a gas lamp ; and pass the evolved gas first through a small wash bottle containing the two ounces of Water, and afterwards to the bottom of a pint bottle containing the Distilled Water, which must be kept cold. Continue the distillation until the bubbles of gas in the wash bottle appear to be equalled by those passing through the fluid in the larger bottle. The product should be kept in a stoppered bottle, and in a cool place.

ACIDUM TANNICUM.

TANNIC ACID.

Take of Galls, in coarse powder, eight ounces ;

Ether, three pints ;

Distilled Water, five fluid ounces.

Mix the Water and the Ether by agitation, and after a few minutes pour the ethereal solution in successive portions upon the Galls previously introduced into a glass or porcelain percolator with a receiver so attached as to prevent loss of ether from evaporation. The liquid which accumulates in the receiver consists of two distinct strata ; separate the heavier liquid, evaporate it to dryness on a water bath, and complete the drying in a hot-air chamber, the temperature of which should not exceed 212° . From the lighter liquid the ether may be recovered by distillation.

ACIDUM TARTARICUM.

TARTARIC ACID.

Take of Acid Tartrate of Potash, forty-five ounces ;
Distilled Water, a sufficiency ;
Prepared Chalk, twelve ounces and a half ;
Chloride of Calcium, thirteen ounces and a half ;
Sulphuric Acid, thirteen fluid ounces.

Boil the Tartrate of Potash with two gallons of the Water, and add gradually the Chalk, constantly stirring. When the effervescence has ceased, add the Chloride of Calcium dissolved in two pints of the Water. When the tartrate of lime has subsided pour off the liquid, and wash the tartrate with Distilled Water until it is rendered tasteless. Pour the Sulphuric Acid first diluted with three pints of the Water on the tartrate of lime, mix thoroughly, boil for half an hour with repeated stirring, and filter through calico. Evaporate the filtrate at a gentle heat until it acquires the specific gravity of 1·21, allow it to cool, and then separate and reject the crystals of sulphate of lime which have formed. Again evaporate the clear liquor till a film forms on its surface, and allow it to cool and crystallize. Lastly purify the

crystals by solution, filtration (if necessary), and recrystallization.

ACONITIA.

ACONITIA.

Take of Aconite Root, in coarse powder, fourteen pounds;

Rectified Spirit, a sufficiency;

Distilled Water, a sufficiency;

Solution of Ammonia, a sufficiency;

Pure Ether, a sufficiency;

Dilute Sulphuric Acid, a sufficiency.

Pour upon the Aconite Root three gallons of the Spirit, mix them well, and heat until ebullition commences; then cool and macerate for four days. Transfer the whole to a displacement apparatus, and percolate, adding more Spirit, when requisite, until the root is exhausted. Distil off the greater part of the spirit from the tincture, and evaporate the remainder over a water bath until the whole of the alcohol has been dissipated. Mix the residual extract thoroughly with twice its weight of boiling Distilled Water, and, when it has cooled to the temperature of the atmosphere, filter

through paper. To the filtered liquid add Solution of Ammonia in slight excess, and heat them gently over a water bath. Separate the precipitate on a filter, and dry it. Reduce this to coarse powder, and macerate it in successive portions of the Ether with frequent agitation. Decant the several products, mix, and distil off the ether until the extract is dry. Dissolve the dry extract in warm Distilled Water acidulated with the Sulphuric Acid; and, when the solution is cold, precipitate it by the cautious addition of Solution of Ammonia diluted with four times its bulk of Distilled Water. Wash the precipitate on a filter with a small quantity of cold Distilled Water, and dry it by slight pressure between folds of filtering paper.

ADEPS PRÆPARATUS.

PREPARED LARD.

Take of The internal Fat of the abdomen of the Hog, perfectly fresh, fourteen pounds.

Remove as much as possible of the membranes, cut the Fat into small pieces, and liquefy it over a water bath at a boiling heat; strain through fine linen, again heat it on the water bath, stirring continually until it becomes clear, and entirely free from water. Keep it in a stone jar.

ÆTHER.

ETHER.

Take of Rectified Spirit, fifty fluid ounces ;
Sulphuric Acid, ten fluid ounces ;
Chloride of Calcium, ten ounces ;
Slaked Lime, half an ounce ;
Distilled Water, thirteen fluid ounces.

Mix the Sulphuric Acid and twelve ounces of the Spirit in a glass matrass capable of containing at least two pints, and, without allowing the mixture to cool, connect the matrass by means of a bent glass tube with a Liebig's condenser, and distil with a heat sufficient to maintain the liquid in brisk ebullition. As soon as the ethereal fluid begins to pass over, supply fresh Spirit through a tube into the matrass in a continuous stream, and in such quantity as to equal the volume of the fluid which distils over. This is best done by using a tube furnished with a stopcock to regulate the supply, connecting one end of the tube with a vessel containing the Spirit raised above the level of the matrass, and passing the other end through a cork fitted into the matrass. When the whole of the Spirit has been added, and forty-two fluid ounces have distilled over, the process may be stopped. Dissolve the Chloride of Calcium in the Water, add the Lime, and agitate the mixture in a bottle with the impure ether.

Leave the mixture at rest for ten minutes, pour off the light supernatant fluid, and distil it with a gentle heat until a glass bead of specific gravity 0·735 placed in the receiver begins to float. The ether and spirit retained by the chloride of calcium and by the residue of each distillation may be recovered by distillation and used in a subsequent operation.

ALUMEN EXSICCATUM.

DRIED ALUM.

Take of Alum, four ounces.

Heat the Alum in a porcelain capsule till it liquefies, raise and continue the heat till aqueous vapour ceases to be disengaged, and then reduce the residue to powder.

AMMONIÆ BENZOAS.

BENZOATE OF AMMONIA.

Take of Solution of Ammonia, three fluid ounces ;
Benzoic Acid, two ounces ;
Distilled Water, eight fluid ounces.

Dissolve the Benzoic Acid in the solution of Ammonia previously mixed with the Water ; evaporate at a gentle heat ; and set aside that crystals may form.

AMMONIÆ PHOSPHAS.

PHOSPHATE OF AMMONIA.

Take of Strong Solution of Ammonia, eight fluid ounces ;

Dilute Phosphoric Acid, twenty fluid ounces.

Add the Solution of Ammonia to the Phosphoric Acid ; dissolve by a gentle heat the crystalline precipitate which forms ; and set the solution aside that crystals may again form. Remove the crystals, and, having dried them quickly on filtering paper placed on a porous brick, preserve them in a stoppered bottle. The mother liquor, if evaporated to half its bulk, will upon being mixed with two fluid ounces of Strong Solution of Ammonia give additional crystals.

ANTIMONII OXIDUM.

OXIDE OF ANTIMONY.

Take of Solution of Terchloride of Antimony, sixteen fluid ounces ;

Carbonate of Soda, five ounces ;

Water, two gallons ;

Distilled Water, a sufficiency.

Pour the Antimonial Solution into the Water, mix thoroughly, and set aside until the precipitate which

forms shall have subsided. Remove the supernatant liquid by a siphon, add one gallon of Distilled Water, agitate well, let the precipitate subside, again withdraw the fluid, and repeat the processes of affusion of Distilled Water, agitation, and subsidence, until the fluid has only a feeble acid reaction on litmus paper. To the precipitate add the Carbonate of Soda previously dissolved in two pints of Distilled Water, leave them in contact for half an hour, stirring frequently, collect the deposit on a calico filter, and wash with boiling distilled water until the washings cease to give a precipitate with a solution of nitrate of silver acidulated by nitric acid. Lastly, dry the product at a heat not exceeding 212° .

ANTIMONIUM SULPHURATUM.

SULPHURATED ANTIMONY.

Take of Prepared Sulphuret of Antimony, ten ounces ;

Solution of Soda, four pints and a half ;

Dilute Sulphuric Acid, a sufficiency ;

Distilled Water, a sufficiency.

Mix the Sulphuret of Antimony with the Solution of Soda and boil for two hours with frequent stirring, adding Distilled Water occasionally to maintain the same volume. Strain the liquor through calico, and, before it cools, add to it by degrees the Dilute Sulphuric

Acid till the latter is in slight excess. Collect the precipitate on a calico filter, wash with Distilled Water till the washings no longer precipitate with chloride of barium, and dry at a temperature not exceeding 212° .

ANTIMONIUM TARTARATUM.

TARTARATED ANTIMONY.

Take of Oxide of Antimony, five ounces ;
Acid Tartrate of Potash, in fine powder, six
ounces ;
Distilled Water, two pints.

Mix the Oxide of Antimony and Tartrate of Potash with sufficient Distilled Water to form a paste, and set aside for twenty-four hours. Then add the remainder of the Water and boil for a quarter of an hour, stirring frequently. Filter, and set aside the clear filtrate to crystallize. Pour off the mother liquor, evaporate to one third, and set aside that more crystals may form. Dry the crystals on filtering paper at the temperature of the air.

AQUA ANETHI.

DILL WATER.

Take of Dill, bruised, twenty ounces ;
Water, two gallons.
Distil one gallon.

AQUA CAMPHORÆ.

CAMPHOR WATER.

Synonym.—MISTURA CAMPHORÆ.

Take of Camphor, broken into pieces, half an ounce ;
Distilled Water, one gallon.

Enclose the Camphor in a muslin bag, and attach this to the stopper of a jar containing the Distilled Water. Invert the jar ; allow it to stand for at least two days ; and pour off the solution when required.

AQUA CARUL.

CARAWAY WATER.

Take of Caraway, bruised, twenty ounces ;
Water, two gallons.

Distil one gallon.

AQUA CINNAMOMI.

CINNAMON WATER.

Take of Cinnamon, bruised, twenty ounces ;
Water, two gallons.

Distil one gallon.

AQUA DESTILLATA.

DISTILLED WATER.

Take of Water, free from taste and odour, ten gallons.

Distil from a copper still, connected with a block-tin worm ; reject the first half gallon, and preserve the next eight gallons.

Tests.—A fluid ounce of it evaporated in a clean glass capsule leaves no visible residue. It is not affected by sulphuretted hydrogen, oxalate of ammonia, nitrate of silver, chloride of barium, or solution of lime.

AQUA FENICULI.

FENNEL WATER.

Take of Sweet Fennel Fruit, bruised, twenty ounces ;
Water, two gallons.

Distil one gallon.

AQUA LAUROCERASI.

LAUREL WATER.

Take of Fresh Leaves of Common Laurel, one pound ;
Water, two pints and a half.

Chop the Leaves, crush them in a mortar, and macerate them in the Water for twenty-four hours. Distil one pint of liquid, using a chloride of zinc bath and a Liebig's condenser. Shake the product, filter through paper, and preserve in a stoppered bottle.

AQUA MENTHÆ PIPERITÆ.

PEPPERMINT WATER.

Take of English Oil of Peppermint, one fluid drachm
and a half;

Water, one gallon and a half.

Distil one gallon.

AQUA MENTHÆ VIRIDIS.

SPEARMINT WATER.

Take of English Oil of Spearmint, one fluid drachm
and a half;

Water, one gallon and a half.

Distil one gallon.

AQUA PIMENTÆ.

PIMENTO WATER.

Take of Pimento, bruised, fourteen ounces ;
Water, two gallons.

Distil one gallon.

AQUA ROSÆ.

ROSE WATER.

Take of Fresh Petals of the Hundred-leaved Rose,
ten pounds ;
Water, two gallons.

Distil one gallon.

AQUA SAMBUCL.

ELDER-FLOWER WATER.

Take of Fresh Elder Flowers, separated from the
stalks, ten pounds ;
Water, two gallons.

Distil one gallon.

ARGENTI NITRAS.

NITRATE OF SILVER.

Take of Refined Silver, three ounces ;

Nitric Acid, one fluid ounce and three quarters ;

Distilled Water, five fluid ounces.

Add the Nitric Acid and the Water to the Silver in a flask, and apply a gentle heat till the metal is dissolved. Decant the clear liquor from any black powder which may be present, into a porcelain dish, evaporate, and set aside to crystallize ; pour off the liquor, and again evaporate and crystallize. Let the crystals drain in a glass funnel, and dry them by exposure to the air, carefully avoiding the contact of all organic substances. To obtain the nitrate in rods, fuse the crystals in a dark room in a capsule of platinum or thin porcelain, and pour the melted salt into proper moulds. Nitrate of Silver must be preserved in bottles furnished with accurately ground stoppers.

ARGENTI OXIDUM.

OXIDE OF SILVER.

Take of Nitrate of Silver, in crystals, half an ounce ;

Solution of Lime, three pints and a half ;

Distilled Water, ten fluid ounces.

Dissolve the Nitrate of Silver in four ounces of the Distilled Water, and, having poured the solution into a bottle containing the Solution of Lime, shake the mixture well, and set it aside to allow the deposit to settle. Draw off the supernatant liquid, collect the deposit on a filter, wash it with the remainder of the Distilled Water, and dry it at a heat not exceeding 212° . Keep it in a stoppered bottle.

ATROPIA.

ATROPIA.

Take of Belladonna Root, recently dried, and in coarse powder, two pounds ;
Rectified Spirit, ten pints ;
Slaked Lime, one ounce ;
Water, half a fluid ounce ;
Dilute Sulphuric Acid, a sufficiency ;
Carbonate of Potash, a sufficiency ;
Chloroform, three fluid ounces ;
Purified Animal Charcoal, a sufficiency ;
Distilled Water, ten fluid ounces.

Macerate the Root in two quarts of the Spirit, for twenty-four hours, with frequent stirring. Transfer to a displacement apparatus, and exhaust with the remainder of the Spirit by slow percolation. Add the Lime to the tincture placed in a bottle, and

shake occasionally several times. Filter, add the Dilute Sulphuric Acid in very feeble excess, and filter again. Distil off three fourths of the spirit, add to the residue the Distilled Water, evaporate at a gentle heat, but as rapidly as possible, until the liquid is reduced to one third of its volume and no longer smells of alcohol; then let it cool. Add very cautiously, with constant stirring, a solution of the Carbonate of Potash so as nearly to neutralize the acid, care, however, being taken that an excess is not used. Set to rest for six hours, then filter, and add Carbonate of Potash in such quantity that the liquid shall acquire a decided alkaline reaction. Place it in a bottle with the Chloroform; mix well by frequently repeated brisk agitation, and pour the mixed liquids into a funnel furnished with a glass stopcock. When the chloroform has subsided, draw it off by the stopcock, and distil it on a water bath from a retort connected with a condenser. Dissolve the residue in warm Rectified Spirit; digest the solution with a little Animal Charcoal; filter, evaporate, and cool until colourless crystals are obtained.

BEBERLÆ SULPHAS.

SULPHATE OF BEBERIA.

Take of Bebeeru Bark, in coarse powder, one pound ;
Sulphuric Acid, half a fluid ounce ;
Slaked Lime, three quarters of an ounce,
or a sufficiency ;
Solution of Ammonia, a sufficiency ;
Rectified Spirit, sixteen fluid ounces, or a
sufficiency ;
Dilute Sulphuric Acid, a sufficiency ;
Water, one gallon ;
Distilled Water, a sufficiency.

Add the Sulphuric Acid to the Water ; pour upon the Bebeeru Bark enough of this mixture to moisten it thoroughly ; let it macerate for twenty-four hours ; place it in a percolator, and pass through it the remainder of the acidulated water. Concentrate the acid liquor to the bulk of one pint, cool, and add gradually the Lime in the form of milk of lime, agitating well, and taking care that the fluid still retains a distinct acid reaction. Let it rest for two hours ; filter through calico ; wash the precipitate with a little cold Distilled Water, and add to the filtrate Solution of Ammonia until the fluid has a faint ammoniacal odour. Collect the precipitate

on a cloth, wash it twice with ten ounces of cold water, squeeze it gently with the hand, and dry it on the vapour bath. Pulverize the dry precipitate, put it into a flask with six ounces of the Rectified Spirit, boil, let it rest for a few minutes, and pour off the spirit. Treat the undissolved portion in a similar manner with fresh Spirit, until it is exhausted. Unite the spirituous solutions, add to them four ounces of Distilled Water, and distil so as to recover the greater part of the spirit. To the residue of the distillation, add by degrees, and with constant stirring, Dilute Sulphuric Acid till the fluid has a slight acid reaction. Evaporate the whole to complete dryness on the water bath, pulverize the dry product, pour on it gradually one pint of cold Distilled Water, stirring diligently, filter through paper, evaporate the filtrate to the consistence of syrup, spread it in thin layers on flat porcelain or glass plates, and dry it at a heat not exceeding 140° . Preserve the product in stoppered bottles.

BISMUTHUM ALBUM.

WHITE BISMUTH.

Take of Bismuth, in coarse powder, two ounces ;
Nitric Acid, two fluid ounces and a half ;
Distilled Water, one gallon.

Dilute the Nitric Acid with three ounces of the Water, and add the Bismuth in successive portions. When effervescence has ceased, apply for ten minutes a heat approaching that of ebullition, and decant the solution from any particles of metal which may remain undissolved. Evaporate the solution till it is reduced to two fluid ounces, and pour it into half a gallon of the Water. When the precipitate which forms has subsided, decant the supernatant liquid, and agitate the sediment with the remainder of the Water. After two hours, again decant, and, having placed the product on a filter, dry it at a temperature of 212° .

CALCIS CARBONAS PRÆCIPITATA.

PRECIPITATED CARBONATE OF LIME.

Take of Chloride of Calcium, five ounces ;
Carbonate of Soda, thirteen ounces ;
Boiling Distilled Water, a sufficiency.

Dissolve the Chloride of Calcium and the Carbonate of Soda each in two pints of the Water ; mix the two solutions ; and allow the precipitate to subside. Collect this on a calico filter, wash it with boiling Distilled Water, until the washings cease to give a precipitate with nitrate of silver, and dry the product at the temperature of 212° .

CALCIS HYDRAS.

SLAKED LIME.

Take of Lime, recently burned, two pounds ;
Distilled Water, one pint.

Place the Lime in a metal pot, pour the Water upon it, and when vapour ceases to be disengaged cover the pot with its lid, and set it aside to cool. When its temperature has fallen to that of the atmosphere, remove its contents, pass the powder through an iron-wire sieve, and put it into a wide-mouthed bottle, which should be accurately closed by a well fitted cork.

Slaked Lime should be recently prepared.

CALCIS PHOSPHAS PRÆCIPITATA.

PRECIPITATED PHOSPHATE OF LIME.

Take of Bone Ash, four ounces ;
Hydrochloric Acid, six fluid ounces ;
Distilled Water, two pints ;
Solution of Ammonia, twelve fluid ounces,
or a sufficiency.

Digest the Bone Ash in the Hydrochloric Acid, diluted with a pint of Water, until it is dissolved. Filter the solution, if necessary ; add the remainder of the Water, and afterwards the Solution of Ammonia,

until the mixture acquires an alkaline reaction ; and, having collected the precipitate on a calico filter, wash it with boiling Distilled Water as long as the liquid which passes through occasions a precipitate when dropped into the solution of nitrate of silver acidulated with nitric acid. Dry the washed product at a temperature not exceeding 212° .

CALOMELAS.

CALOMEL.

Take of Sulphate of Mercury, ten ounces ;
Mercury, by weight, seven ounces ;
Chloride of Sodium, dried, five ounces ;
Boiling Distilled Water, a sufficiency.

Moisten the Sulphate of Mercury with the Water, and rub it and the Mercury together until globules are no longer visible ; add the Chloride of Sodium, and thoroughly mix the whole by continued trituration. Sublime by a suitable apparatus into a chamber of such size that the Calomel, instead of adhering to its sides as a crystalline crust, shall fall as a fine powder on its floor. Wash this powder with boiling Distilled Water, until the washings cease to be darkened by a drop of hydrosulphuret of ammonia. Finally, dry at a heat not exceeding 212° , and preserve in a jar or bottle impervious to light.

CARBO ANIMALIS PURIFICATUS.

PURIFIED ANIMAL CHARCOAL.

Take of Bone Black, sixteen ounces ;
Hydrochloric Acid, ten fluid ounces ;
Distilled Water, a sufficiency.

Mix the Hydrochloric Acid with a pint of the Water, and add the Bone Black, stirring occasionally. Digest at a moderate heat for two days, agitating from time to time ; collect the undissolved charcoal on a calico filter, and wash with Distilled Water till what passes through gives scarcely any precipitate with nitrate of silver. Dry the charcoal, and then heat it to redness in a covered crucible.

CATAPLASMA CARBONIS.

CHARCOAL POULTICE.

Take of Wood Charcoal, in powder, half an ounce ;
Bread, two ounces ;
Linseed Meal, one ounce and a half ;
Boiling Water, ten fluid ounces.

Macerate the Bread in the Water for a short time near the fire, then mix, and add the Linseed Meal

gradually, stirring the ingredients, that a soft poultice may be formed. Mix with this half the Charcoal, and sprinkle the remainder on the surface of the poultice.

CATAPLASMA CONII.

HEMLOCK POULTICE.

Take of Hemlock Leaf, in powder, one ounce ;
Linseed Meal, three ounces ;
Boiling Water, ten fluid ounces.

Mix the Hemlock and Linseed Meal, and add them to the Water gradually, constantly stirring.

CATAPLASMA FERMENTI.

YEAST POULTICE.

Take of Beer Yeast, six fluid ounces ;
Flour, fourteen ounces ;
Water, heated to 100°, six fluid ounces.

Mix the Yeast with the Water ; and stir in the Flour. Place the mass near the fire till it rises.

CATAPLASMA LINI.

LINSEED POULTICE.

Take of Linseed Meal, four ounces ;
Olive Oil, half a fluid ounce ;
Boiling Water, ten fluid ounces.

Mix the Linseed Meal with the Oil, then add the Water gradually, constantly stirring.

CATAPLASMA SINAPIS.

MUSTARD POULTICE.

Take of Mustard, in powder, two ounces and a half ;
Linseed Meal, two ounces and a half ;
Boiling Water, ten fluid ounces.

Mix gradually the Linseed Meal with the Water, and add the Mustard, constantly stirring.

CATAPLASMA SODÆ CHLORATÆ.

CHLORINE POULTICE.

Take of Solution of Chlorinated Soda, two fluid ounces ;
Linseed Meal, four ounces ;
Boiling Water, eight fluid ounces.

Add the Linseed Meal gradually to the Water, stirring constantly; then mix in the Solution of Chlorinated Soda.

CHLOROFORMUM.

CHLOROFORM.

Take of Chlorinated Lime, ten pounds;
Rectified Spirit, thirty fluid ounces;
Slaked Lime, a sufficiency;
Water, three gallons;
Sulphuric Acid, a sufficiency;
Chloride of Calcium, in small fragments,
two ounces;
Distilled Water, nine fluid ounces.

Place the Water and the Spirit in a capacious still, and raise the mixture to the temperature of 100°. Add the Chlorinated Lime and five pounds of the Slaked Lime, mixing thoroughly. Connect the still with a condensing worm encompassed by cold water, and terminating in a narrow-necked receiver; and apply heat so as to cause distillation, taking care to withdraw the fire the moment that the process is well established. When the distilled product measures fifty ounces, the receiver is to be withdrawn. Pour its contents into a gallon bottle half filled with Water, mix well by shaking, and set at rest for a few minutes, when the mixture will separate into two strata of

different densities. Let the lower stratum, which constitutes crude chloroform, be washed by agitating it in a bottle with three ounces of the Distilled Water. Allow the chloroform to subside, withdraw the water, and repeat the washing with the rest of the Distilled Water, in successive quantities of three ounces at a time. Agitate the washed chloroform for five minutes in a bottle with an equal volume of Sulphuric Acid, allow the mixture to settle, and transfer the upper stratum of liquid to a flask containing the Chloride of Calcium mixed with half an ounce of Slaked Lime, which should be perfectly dry. Mix well by agitation. After the lapse of an hour connect the flask with a Liebig's condenser, and distil over the pure Chloroform by means of a water bath. Preserve the product in a cool place, in a bottle furnished with an accurately ground stopper.

The lighter liquid which floats on the crude chloroform after its agitation with water, and the washings with distilled water, should be preserved, and employed in a subsequent operation.

COLLODIUM.

COLLODIUM.

Take of Pyroxylin one ounce ;
Ether, thirty-six fluid ounces ;
Rectified Spirit, twelve fluid ounces.

Mix the Ether and the Spirit, and add the Pyroxylin. Set aside for a few days, and, should there be any sediment, decant the clear solution. Keep it in a stoppered bottle.

CONFECTIO PIPERIS.

CONFECTION OF PEPPER.

Take of Black Pepper, in fine powder, two ounces ;
Caraway, in fine powder, three ounces ;
Clarified Honey, fifteen ounces.

Rub them well together in a mortar.

CONFECTIO ROSÆ CANINÆ.

CONFECTION OF HIPS.

Take of Hips, carefully deprived of their seeds, one
pound ;
Refined Sugar, two pounds.

Beat the Hips to a pulp in a stone mortar, add the Sugar, and rub them well together.

CONFECTIO ROSÆ GALLICÆ.

CONFECTION OF ROSES.

Take of Fresh Red-Rose Petals, one pound ;
Refined Sugar, three pounds.

Beat the Petals to a pulp in a stone mortar, add the Sugar, and rub them well together.

CONFECTIO SCAMMONII.

CONFECTION OF SCAMMONY.

Take of Scammony, or Resin of Scammony, in fine powder, three ounces ;
Ginger, in fine powder, one ounce and a half ;
Oil of Caraway, one fluid drachm ;
Oil of Cloves, half a fluid drachm ;
Syrup, three fluid ounces ;
Clarified Honey, one ounce and a half.

Rub the powders with the Syrup and the Honey into a uniform mass, then add the Oils, and mix.

CONFECTIO SENNÆ.

CONFECTION OF SENNA.

Take of Senna, in fine powder, seven ounces ;
Coriander, in fine powder, three ounces ;
Figs, twelve ounces ;
Tamarinds, nine ounces ;
Cassia Pulp, nine ounces ;
Prunes, six ounces ;
Extract of Liquorice, three quarters of an ounce ;
Refined Sugar, thirty ounces ;
Distilled Water, twenty-four fluid ounces.

Boil the Figs gently in the Water in a covered vessel for four hours : then express and strain the liquor ; and having added more Distilled Water to make up the quantity to twenty-four fluid ounces, put into it the Prunes, and boil as before for four hours. Add the Tamarinds and the Cassia ; macerate for a short time ; and press the pulp through a hair sieve. Dissolve the Sugar and the Extract of Liquorice in the mixture with a gentle heat ; and, while it is still warm, add to it gradually the mixed Senna and Coriander, and stir diligently until all the ingredients are thoroughly combined. The resulting Confection should weigh sixty ounces.

CONFECTIO SULPHURIS.

CONFECTION OF SULPHUR.

Take of Sublimed Sulphur, four ounces ;
Acid Tartrate of Potash, in powder, one
ounce ;
Syrup of Orange Peel, four fluid ounces.

Rub them well together.

CONFECTIO TEREBINTHINÆ.

CONFECTION OF TURPENTINE.

Take of Oil of Turpentine, one fluid ounce ;
Liquorice Root, in powder, one ounce ;
Clarified Honey, two ounces.

Rub the Oil of Turpentine with the Liquorice, add the Honey, and mix them together to a uniform consistence.

CRETA PRÆPARATA.

PREPARED CHALK.

Take of Chalk, one pound ;
Water, a sufficiency.

Reduce the Chalk to powder, and having rubbed this in a mortar with as much Water as will give it the consistence of cream, fill the mortar with more Water, and stir well, giving the whole a circular motion. Allow the mixture to stand for fifteen seconds, and then decant the milky liquid into a large vessel. Rub what remains in the mortar, adding as much Water as was previously used, and, after allowing it to settle for fifteen seconds, again decant, and let this process be repeated several times, using, if necessary, additional Chalk. Transfer the fine sediment which subsides from the decanted liquids to a filter, and dry it at a temperature of 212° .

CUPRI SULPHAS.

SULPHATE OF COPPER.

Take of Sulphate of Copper of Commerce, eight ounces;

Boiling Distilled Water, one pint.

Dissolve the Sulphate of Copper in the Water; filter the solution, and set it by that it may crystallize. Remove the crystals to filtering paper placed upon a porous brick, and, having dried them without heat, enclose them in a bottle.

DECOCTUM ALOES COMPOSITUM.

COMPOUND DECOCTION OF ALOES.

Take of Extract of Socotrine Aloes, ninety grains ;
Myrrh, bruised, sixty grains ;
Saffron, chopped fine, sixty grains ;
Carbonate of Potash, forty grains ;
Extract of Liquorice, half an ounce ;
Compound Tincture of Cardamoms, four
fluid ounces ;
Distilled Water, a sufficiency.

Triturate the Aloes, Myrrh, and Carbonate of Potash together ; add the Saffron and Extract of Liquorice, and boil in fourteen ounces of the Water for ten minutes in a covered vessel. Cool, strain through flannel, and add the Tincture of Cardamoms, with as much Water as may be necessary to make up the quantity to sixteen fluid ounces.

DECOCTUM CETRARIÆ.

DECOCTION OF ICELAND MOSS.

Take of Iceland Moss, one ounce ;
Distilled Water, one pint and half.

Wash the Moss in cold water, to remove impurities ; boil it with the Distilled Water for ten minutes in a covered vessel, and strain while hot. The product should measure about a pint.

DECOCTUM CINCHONÆ FLAVÆ.

DECOCTION OF YELLOW CINCHONA.

Take of Yellow-Cinchona Bark, in coarse powder,
one ounce ;
Distilled Water, one pint.

Boil for ten minutes in a covered vessel. Strain the decoction, when cold, through calico ; and add sufficient Distilled Water through the filter to make up the quantity to sixteen fluid ounces.

DECOCTUM GRANATI RADICIS.

DECOCTION OF POMEGRANATE ROOT.

Take of Pomegranate Root, fresh or dry, sliced, two
ounces ;
Distilled Water, two pints.

Boil down to a pint, and strain.

DECOCTUM HÆMATOXYLI.

DECOCTION OF LOGWOOD.

Take of Logwood, in chips, one ounce ;
Cinnamon, in powder, sixty grains ;
Distilled Water, one pint.

Boil the Logwood in the Water for ten minutes, adding the Cinnamon towards the end, and strain. The product should measure sixteen ounces.

DECOCTUM HORDEI.

DECOCTION OF BARLEY.

Take of Pearl Barley, two ounces ;
Distilled Water, one pint and a half.

Wash the Barley in cold water, and reject the washings ; boil with the Distilled Water for twenty minutes in a covered vessel, and strain.

DECOCTUM PAPAVERIS.

DECOCTION OF POPPIES.

Take of Poppy Capsules, bruised, and freed from the seeds, four ounces ;
Distilled Water, three pints.

Boil for ten minutes, and strain. The product should measure thirty-two ounces.

DECOCTUM PAREIRÆ.

DECOCTION OF PAREIRA.

Take of Pareira, sliced, one ounce and a half;
Distilled Water, one pint and a half.

Boil for fifteen minutes, and strain. The product should measure a pint.

DECOCTUM QUERCUS.

DECOCTION OF OAK BARK.

Take of Oak Bark, bruised, one ounce and a half;
Distilled Water, one pint and a half.

Boil for ten minutes in a covered vessel, and strain.

DECOCTUM SARSÆ.

DECOCTION OF SARSAPARILLA.

Take of Jamaica Sarsaparilla, not split, two ounces
and a half;

Boiling Distilled Water, one pint and a
half.

Digest the Sarsaparilla in the Water for an hour ; boil for ten minutes in a covered vessel, cool and strain. The product should measure a pint.

DECOCTUM SARSÆ COMPOSITUM.

COMPOUND DECOCTION OF SARSAPARILLA.

Take of Jamaica Sarsaparilla, not split, two ounces
and a half ;

Sassafras, in chips, a quarter of an ounce ;

Guaiac Wood turnings, a quarter of an
ounce ;

Fresh Liquorice Root, bruised, a quarter of
an ounce ;

Mezereon, sixty grains ;

Boiling Distilled Water, one pint and a half.

Digest all the ingredients in the Water for an hour ; boil for ten minutes in a covered vessel ; cool and strain. The product should measure a pint.

DECOCTUM SCOPARII.

DECOCTION OF BROOM.

Take of Broom Tops, dried, half an ounce ;

Distilled Water, half a pint.

Boil for ten minutes in a covered vessel, and strain. The product should measure about eight ounces.

DECOCTUM TARAXACI.

DECOCTION OF TARAXACUM.

Take of Dried Dandelion Root, sliced and bruised,
one ounce ;

Distilled Water, one pint and a half.

Boil for ten minutes, and strain. The product
should measure one pint.

DIGITALINUM.

DIGITALIN.

Take of Digitalis, in powder, forty ounces ;

Rectified Spirit, two gallons and five fluid
ounces ;

Distilled Water, one pint ;

Acetic Acid, half a fluid ounce ;

Purified Animal Charcoal, half an ounce ;

Solution of Ammonia, a sufficiency ;

Tannic Acid, one hundred and sixty grains ;

Litharge, in fine powder, a quarter of an
ounce ;

Pure Ether, a sufficiency.

Pour on the Digitalis two gallons of the Spirit ;
digest at a heat of 120° for six hours ; and separate
the tincture by filtration and subsequent expression.

Distil off the spirit, and treat the extract with five ounces of the Water, acidulated with the Acetic Acid. Digest with a quarter of an ounce of the Animal Charcoal, filter, and dilute the filtrate with the Water, so that it shall have the bulk of a pint. Now add the Ammonia nearly to neutralization, and afterwards the Tannic Acid dissolved in three ounces of the Water. Wash the precipitate thus obtained with a little of the Water; mix it with a small quantity of the Spirit, and carefully rub it in a mortar with the Litharge. Place the mixture in a flask, and add to it four ounces of the Spirit; raise the temperature to 160° , and maintain it for about an hour. Then add the rest of the Animal Charcoal, filter, and remove the spirit by distillation. Lastly, wash the residue repeatedly with the Ether.

ELATERIUM.

ELATERIUM.

Take of The Fruit of Squirting Cucumber, very nearly ripe, one pound.

Cut the Fruit lengthwise, and lightly press out the juice. Strain it through a hair sieve; and set aside to deposit. Carefully pour off the supernatant liquor; pour the sediment on a linen filter; and dry it on porous bricks with a gentle heat. The decanted fluid may deposit a second portion of sediment, which can be dried in the same way.

EMPLASTRUM AMMONIACI CUM HYDRARGYRO.

AMMONIAC AND MERCURY PLASTER.

Take of Ammoniac, twelve ounces ;
Mercury, three ounces ;
Olive Oil, one fluid drachm ;
Sulphur, eight grains.

Heat the Oil, and add the Sulphur to it gradually, stirring till they unite. With this mixture triturate the Mercury, until globules are no longer visible ; and, lastly, add the Ammoniac, previously liquefied, mixing the whole carefully.

EMPLASTRUM BELLADONNÆ.

BELLADONNA PLASTER.

Take of Extract of Belladonna, three ounces ;
Soap Plaster, one ounce and a half ;
Resin Plaster, one ounce and a half.

Melt the Plasters by the heat of a steam or water bath ; then add the Extract of Belladonna, and mix intimately.

EMPLASTRUM CALEFACIENS.

WARM PLASTER.

Take of Cantharides, in coarse powder, four ounces ;
Boiling Water, one pint ;
Expressed Oil of Nutmeg, four ounces ;
Yellow Wax, four ounces ;
Resin, four ounces ;
Soap Plaster, three pounds and a quarter ;
Resin Plaster, two pounds.

Infuse the Cantharides in the boiling Water for six hours ; squeeze strongly through calico, and evaporate the expressed liquid by a steam or water bath till reduced to one third. Then add the other ingredients, and melt in a steam or water bath, stirring well until the whole is thoroughly mixed.

EMPLASTRUM CANTHARIDIS.

CANTHARIDES PLASTER.

Take of Cantharides, in very fine powder, twelve ounces ;
Yellow Wax, seven ounces and a half ;
Prepared Suet, seven ounces and a half ;

Resin, three ounces ;
Prepared Lard, six ounces.

Liquefy the Wax, Suet, and Lard together by a steam or water bath, and add the Resin, previously melted ; then remove them from the bath, and, a little before they solidify, sprinkle in the Cantharides, and mix by stirring briskly.

EMPLASTRUM FERRI.

CHALYBEATE PLASTER.

Take of Peroxide of Iron, in fine powder, one ounce ;
Burgundy Pitch, two ounces ;
Litharge Plaster, eight ounces.

Add the Peroxide of Iron to the Burgundy Pitch and Litharge Plaster, previously melted together, and stir the mixture constantly till it stiffens on cooling.

EMPLASTRUM GALBANI.

GALBANUM PLASTER.

Take of Galbanum, one ounce ;
Ammoniac, one ounce ;
Yellow Wax, one ounce ;
Litharge Plaster, eight ounces.

Melt the Galbanum and Ammoniac together, and strain. Then add them to the Litharge Plaster and Wax, also previously melted together, and mix the whole thoroughly.

EMPLASTRUM HYDRARGYRI.

MERCURIAL PLASTER.

Take of Mercury, three ounces ;
Olive Oil, one fluid ounce ;
Resin, one ounce ;
Litharge Plaster, six ounces.

Dissolve the Resin in the Oil with the aid of heat ; let them cool ; add the Mercury, and triturate till its globules disappear. Then add to the mixture the Litharge Plaster, previously liquefied, and mix the whole thoroughly.

EMPLASTRUM LITHARGYRI.

LITHARGE PLASTER.

Synonym.—EMPLASTRUM PLUMBI, *Lond.*

Take of Litharge, in very fine powder, four pounds ;
Olive Oil, one gallon ;
Water, three pints and a half.

Boil all the ingredients together gently in a copper pan over a clear fire, and keep simmering for four or five hours, stirring constantly until the Oil and Litharge acquire a proper consistence for a plaster, adding more Water during the process if necessary.

EMPLASTRUM OPII.

OPIUM PLASTER.

Take of Opium, in very fine powder, one ounce ;
Resin Plaster, nine ounces.

Melt the Resin Plaster by means of a steam or water bath ; then add the Opium by degrees, and mix thoroughly.

EMPLASTRUM PICIS.

PITCH PLASTER.

Take of Burgundy Pitch, twenty-six ounces ;
Common Frankincense, thirteen ounces ;
Resin, four ounces and a half ;
Yellow Wax, four ounces and a half ;
Expressed Oil of Nutmeg, one ounce ;
Olive Oil, two fluid ounces ;
Water, two fluid ounces.

Add the Oils and the Water to the Frankincense, Burgundy Pitch, Resin, and Wax, previously melted together; then, constantly stirring, evaporate to a proper consistence.

EMPLASTRUM RESINÆ.

RESIN PLASTER.

Take of Resin, in powder, four ounces;
Litharge Plaster, two pounds;
Hard Soap, in powder, two ounces.

To the Litharge Plaster, previously melted with a gentle heat, add the Resin and Soap, first liquefied, and heat them until they are thoroughly mixed.

EMPLASTRUM SAPONIS.

SOAP PLASTER.

Take of Hard Soap, in powder, six ounces;
Litharge Plaster, two pounds and a quarter;
Resin, in powder, one ounce.

To the Litharge Plaster, melted by a gentle heat, add the Soap and the Resin, first liquefied; then, constantly stirring, evaporate to a proper consistence.

ENEMA ALOES.

ENEMA OF ALOES.

Take of Aloes, forty grains ;
Carbonate of Potash, fifteen grains ;
Mucilage of Starch, ten fluid ounces.

Mix, and rub together.

ENEMA ASSAFŒTIDÆ.

ENEMA OF ASSAFŒTIDA.

Synonym.—ENEMA FŒTIDUM, *Ed. Dub.*

Take of Tincture of Assafœtida, six fluid drachms ;
Mucilage of Starch, six fluid ounces.

Mix.

ENEMA MAGNESIÆ SULPHATIS.

ENEMA OF SULPHATE OF MAGNESIA.

Synonym.—ENEMA CATHARTICUM, *Ed. Dub.*

Take of Sulphate of Magnesia, one ounce ;
Olive Oil, one fluid ounce ;
Mucilage of Starch, fifteen fluid ounces.

Dissolve the Sulphate of Magnesia in the Mucilage of Starch, add the Oil, and mix.

ENEMA OPII.

ENEMA OF OPIUM.

Take of Tincture of Opium, half a fluid drachm ;
Mucilage of Starch, two fluid ounces.

Mix.

ENEMA TABACI.

ENEMA OF TOBACCO.

Take of Leaf Tobacco, twenty grains ;
Boiling Water, eight fluid ounces.

Infuse in a covered vessel, for half an hour, and strain.

ENEMA TEREBINTHINÆ.

ENEMA OF TURPENTINE.

Take of Oil of Turpentine, one fluid ounce ;
Mucilage of Starch, fifteen fluid ounces.

Mix.

EXTRACTUM ACONITI.

EXTRACT OF ACONITE.

Take of The fresh Leaves and Flowering Tops of Aconite, one hundred and twelve pounds.

Bruise in a stone mortar, and press out the juice; heat it gradually to 130° , and separate the green colouring matter by a calico filter. Heat the strained liquor to 200° to coagulate the albumen, and again filter. Evaporate the filtrate by a water bath to the consistence of a thin syrup; then add to it the green colouring matter previously separated, and, stirring the whole together assiduously, continue the evaporation at a temperature not exceeding 140° , until the extract is of a proper consistence.

EXTRACTUM ALOES BARBADENSIS.

EXTRACT OF BARBADOES ALOES.

Take of Barbadoes Aloes, in small fragments, one pound;

Boiling Distilled Water, one gallon.

Add the Aloes to the Water, and stir well until they are thoroughly mixed. Set aside for twelve hours; then pour off the clear liquor, strain the remainder, and evaporate the mixed liquors by a water bath or a current of warm air to a proper consistence.

EXTRACTUM ALOES SOCOTRINÆ.

EXTRACT OF SOCOTRINE ALOES.

Take of Socotrine Aloes, in small fragments, one pound ;

Boiling Distilled Water, one gallon.

Add the Aloes to the Water, and stir well until they are thoroughly mixed. Set aside for twelve hours ; then pour off the clear liquor, strain the remainder, and evaporate the mixed liquors by a water bath or a current of warm air to a proper consistence.

EXTRACTUM ANTHEMIDIS.

EXTRACT OF CHAMOMILE.

Take of Chamomile Flowers, one pound ;

Oil of Chamomile, fifteen minims ;

Distilled Water, a sufficient quantity.

Digest the Chamomile in six pints of the Water for twelve hours, pour off the clear liquor and press ; again digest, and press as before. Evaporate the mixed liquors by a water bath to a proper consistence, adding the Oil of Chamomile at the end of the process.

EXTRACTUM BELÆ LIQUIDUM.

LIQUID EXTRACT OF BÆL.

Take of Bæl, one pound ;
Distilled Water, twelve pints;
Rectified Spirit, two fluid ounces.

Macerate the Bæl for twelve hours in one third of the Water ; pour off the clear liquor ; repeat the maceration a second and third time for one hour in the remaining two thirds of the Water ; press the marc ; and filter the mixed liquors through flannel. Evaporate to fourteen fluid ounces ; and, when cold, add the Rectified Spirit.

EXTRACTUM BELLADONNÆ.

EXTRACT OF BELLADONNA.

Take of The fresh Leaves and young Branches of
Belladonna, one hundred and twelve
pounds.

Bruise the Belladonna in a stone mortar, press out the juice, heat it gradually to 130° , and separate the green colouring matter by a calico filter. Heat the strained liquor to 200° to coagulate the albumen, and again filter. Evaporate the filtrate by a water bath to the consistence of a thin syrup ; then add to it the

green colouring matter previously separated, and, stirring the whole together assiduously, continue the evaporation at a temperature not exceeding 140°, until the extract is of a proper consistence.

EXTRACTUM CALUMBÆ.

EXTRACT OF CALUMBO.

Take of Calumbo, in powder, one pound ;
Proof Spirit, four pints.

Macerate the Calumbo in two pints of the Spirit for twenty-four hours ; pack in a percolator, and pass the remainder of the Spirit slowly through it ; distil off the spirit ; and evaporate the residue to a proper consistence.

EXTRACTUM CANNABIS INDICÆ.

EXTRACT OF INDIAN HEMP.

Take of Indian Hemp, in coarse powder, one pound ;
Rectified Spirit, four pints.

Macerate the Hemp in the Spirit for seven days, and press out the tincture. Distil off the spirit and evaporate by a water bath to a proper consistence.

EXTRACTUM CINCHONÆ FLAVÆ LIQUIDUM.

LIQUID EXTRACT OF YELLOW CINCHONA.

Take of Yellow-Cinchona Bark, in coarse powder,
one pound ;

Distilled Water, a sufficient quantity ;

Rectified Spirit, one fluid ounce.

Macerate the Cinchona Bark, in two pints of the Water, for twenty-four hours, stirring frequently ; then pack in a percolator, and add more Water, until twelve pints have been collected, or a sufficient quantity to exhaust the bark. Evaporate the liquor at a temperature not exceeding 160° to a pint ; then filter through paper, and continue the evaporation to three fluid ounces, or until the specific gravity of the liquid is 1.200. When cold, add the Spirit gradually, constantly stirring. The specific gravity should be about 1.100.

EXTRACTUM COLCHICL.

EXTRACT OF COLCHICUM.

Take of Fresh Colchicum Corms, deprived of their coats, seven pounds

Crush the Corms ; press out the juice ; allow the feculence to subside, and heat the clear liquor to 212° ;

then strain through flannel and evaporate by a water bath at a temperature not exceeding 160° to a proper consistence.

EXTRACTUM COLCHICI ACETICUM.

ACETIC EXTRACT OF COLCHICUM.

Take of Fresh Colchicum Corms, deprived of their coats, seven pounds ;

Acetic Acid, six fluid ounces.

Crush the Corms, add the Acetic Acid, and press out the juice ; allow the feculence to subside, and heat the clear liquor to 212° ; then strain through flannel, and evaporate by a water bath at a temperature not exceeding 160° to a proper consistence.

EXTRACTUM COLOCYNTHIDIS COMPOSITUM.

COMPOUND EXTRACT OF COLOCYNTH.

Take of Colocynth, freed from the seeds, six ounces ;

Extract of Socotrine Aloes, twelve ounces ;

Scammony, or Resin of Scammony, in powder, four ounces ;

Hard Soap, in powder, three ounces ;

Cardamoms, freed from the capsules, in fine powder, one ounce ;

Proof Spirit, one gallon.

Macerate the Colocynth in the Spirit for four days ; press out the tincture and add to it the Extract of Aloes, the Soap, and the Scammony. Distil off the spirit, and evaporate the residue by a water bath to a pilular consistence, adding the Cardamoms towards the end of the process.

EXTRACTUM CONII.

EXTRACT OF HEMLOCK.

Take of The fresh Leaves and young Branches of Hemlock, one hundred and twelve pounds.

Bruise in a stone mortar, and press out the juice ; heat it gradually to 130° , and separate the green colouring matter by a calico filter. Heat the strained liquor to 200° to coagulate the albumen, and again filter. Evaporate the filtrate by a water bath to the consistence of a thin syrup ; then add to it the green colouring matter previously separated, and stirring the whole together assiduously, continue the evaporation at a temperature not exceeding 140° , until the extract is of a proper consistence.

EXTRACTUM ERGOTÆ LIQUIDUM.

LIQUID EXTRACT OF ERGOT.

Take of Ergot, in coarse powder, one pound ;
Ether, one pint ;

Distilled Water, three pints and a half ;
Rectified Spirit, eight fluid ounces.

Shake the Ether in a bottle with half a pint of the Water, and after separation decant the ether. Place the Ergot in a percolator, and free it from its oil by passing the washed ether through it. Remove the marc, and digest it in three pints of the Water at 160° for twelve hours. Press out, strain, and evaporate the liquor to nine fluid ounces ; and, when cold, add the Spirit. Allow it to stand for an hour to coagulate, then filter. The product should measure sixteen fluid ounces.

EXTRACTUM FILICIS LIQUIDUM.

LIQUID EXTRACT OF FERN ROOT.

Take of Fern Root, in coarse powder, two pounds ;
Ether, four pints, or a sufficiency.

Mix the Fern Root with two pints of the Ether ; pack closely in a percolator ; and add the remainder of the Ether at intervals, until it passes through colourless. Let the ether evaporate on a water bath, or recover it by distillation, and preserve the oily extract.

EXTRACTUM GENTIANÆ.

EXTRACT OF GENTIAN.

Take of Gentian, sliced, one pound ;
Boiling Distilled Water, one gallon.

Macerate the Gentian in the Water for two hours ; boil for fifteen minutes ; pour off, press, and strain. Then evaporate by a water bath to a proper consistence.

EXTRACTUM GLYCYRRHIZÆ.

EXTRACT OF LIQUORICE.

Take of Liquorice Root, in coarse powder, one pound ;
Distilled Water, a sufficiency.

Macerate the Liquorice Root in eight fluid ounces of the Water, for twelve hours ; then pack in a percolator and add more Distilled Water, until the root is exhausted. Heat the liquor to 212° and strain through flannel ; then evaporate by a water bath to a proper consistence.

EXTRACTUM HÆMATOXYLI.

EXTRACT OF LOGWOOD.

Take of Logwood, in fine chips, one pound ;
Boiling Distilled Water, one gallon.

Macerate the Logwood in the Water for twenty-four hours, then boil down to one half, strain, and evaporate by a water bath to a proper consistence, stirring with a wooden spatula. Iron vessels should not be used.

EXTRACTUM HYOSCYAMI.

EXTRACT OF HYOSCYAMUS.

Take of The fresh Leaves and young Branches of Hyoscyamus, one hundred and twelve pounds.

Bruise in a stone mortar, and press out the juice; heat it gradually to 130° , and separate the green colouring matter by a calico filter. Heat the strained liquor to 200° to coagulate the albumen, and again filter. Evaporate the filtrate by a water bath to the consistence of a thin syrup; then add to it the green colouring matter previously separated, and, stirring the whole assiduously, continue the evaporation at a temperature not exceeding 140° , until the extract is of a proper consistence.

EXTRACTUM JALAPÆ.

EXTRACT OF JALAP.

Take of Jalap, in coarse powder, one pound;
Rectified Spirit, four pints;
Distilled Water, one gallon.

Macerate the Jalap in the Spirit for seven days; press out the tincture, then filter, and distil off the

spirit, leaving a soft extract. Again macerate the residual Jalap in the Water for four hours, express, strain through flannel, and evaporate by a water bath to a soft extract. Mix the two extracts, and evaporate at a temperature not exceeding 140° to a proper consistence.

EXTRACTUM KRAMERLÆ.

EXTRACT OF RHATANY.

Take of Rhatany, in coarse powder, one pound ;
Distilled Water, one gallon.

Macerate the Rhatany in a pint and a half of the Water for twenty-four hours ; then pack in a percolator, and add more Distilled Water, until twelve pints have been collected, or the Rhatany is exhausted. Evaporate the liquor by a water bath to a proper consistence.

EXTRACTUM LUPULI.

EXTRACT OF HOP.

Take of Hop, one pound ;
Rectified Spirit, one pint and a half ;
Distilled Water, one gallon.

Macerate the Hop in the Spirit for seven days, press out the tincture, filter, and distil off the spirit, leaving

a soft extract. Boil the residual Hop with the Water for one hour, then express the liquor, strain, and evaporate by a water bath to the consistence of a soft extract. Mix the two extracts, and evaporate at a temperature not exceeding 140° to a proper consistence.

EXTRACTUM NUCIS VOMICÆ.

EXTRACT OF NUX VOMICA.

Take of Nux Vomica, one pound ;
Rectified Spirit, a sufficiency.

Apply steam to the Nux Vomica until it is thoroughly softened, then dry rapidly, and reduce to fine powder. Exhaust the powder by boiling it with successive portions of the Spirit until the latter comes off nearly free from bitterness. Strain, distil off the spirit, and evaporate by a water bath to a proper consistence.

EXTRACTUM OPII.

EXTRACT OF OPIUM.

Take of Opium, in thin slices, one pound ;
Distilled Water, six pints.

Macerate the Opium in two pints of the Water for twenty-four hours, and express the liquor. Reduce the Opium to a uniform pulp, macerate it again in two

pints of the Water for twenty-four hours, and express. Repeat the operation a third time. Mix the liquors, strain through flannel, and evaporate by a water bath to a proper consistence.

EXTRACTUM OPII LIQUIDUM.

LIQUID EXTRACT OF OPIUM.

Take of Extract of Opium, one ounce ;
Distilled Water, seventeen fluid ounces ;
Rectified Spirit, three fluid ounces.

Digest the Extract of Opium in the Water for an hour, stirring frequently ; filter, and add the Spirit. The product should measure one pint.

EXTRACTUM PAREIRÆ LIQUIDUM.

LIQUID EXTRACT OF PAREIRA.

Take of Pareira, in coarse powder, one pound ;
Boiling Distilled Water, one gallon, or a
sufficiency ;
Rectified Spirit, three fluid ounces.

Macerate the Pareira in a pint of the Water for twenty-four hours, then pack in a percolator, and add Distilled Water, until the Pareira is exhausted. Eva-

porate the liquor by a water bath to thirteen fluid ounces, and, when it is cold, add the Spirit and filter through paper.

EXTRACTUM QUASSIÆ.

EXTRACT OF QUASSIA.

Take of Quassia, in moderately fine powder, one pound;

Distilled Water, a sufficiency.

Macerate the Quassia in eight fluid ounces of the Water for twelve hours; then pack in a percolator, and add Distilled Water, until the Quassia is exhausted. Evaporate the liquor; filter before it becomes too thick; and again evaporate by a water bath to a proper consistence.

EXTRACTUM RHEI.

EXTRACT OF RHUBARB.

Take of Rhubarb, sliced or bruised, one pound;

Rectified Spirit, ten fluid ounces;

Distilled Water, five pints.

Mix the Spirit and the Water, and macerate the Rhubarb in the mixture for four days; then decant, press, and set by, that the undissolved matter may

subside ; pour off the clear liquor, filter the remainder, mix the liquors, and evaporate by a water bath at a temperature not exceeding 160° to a proper consistence.

EXTRACTUM SARSÆ LIQUIDUM.

LIQUID EXTRACT OF SARSAPARILLA.

Take of Jamaica Sarsaparilla, not split, one pound ;
Distilled Water, at 160° , fourteen pints ;
Rectified Spirit, one fluid ounce.

Macerate the Sarsaparilla in one half of the Water for six hours, and decant the liquor. Digest the residue in the remainder of the Water for the same time, express and filter the mixed liquors, and evaporate them by a water bath to seven fluid ounces, or until the specific gravity of the liquid is 1.13. When cold, add the Spirit.

The specific gravity should be about 1.095.

EXTRACTUM STRAMONII.

EXTRACT OF STRAMONIUM.

Take of Stramonium Seeds, in coarse powder, one pound ;
Proof Spirit, a sufficiency.

Pack the powder in a percolator, and add the Spirit until the powder is exhausted. Distil off the spirit, and evaporate the residue by a water bath to a proper consistence.

EXTRACTUM TARAXACI.

EXTRACT OF TARAXACUM.

Take of Fresh Dandelion Root, four pounds.

Crush the Root; press out the juice, and allow it to deposit; heat the clear liquor to 212° , and maintain the temperature for ten minutes; then strain, and evaporate by a water bath at a temperature not exceeding 160° to a proper consistence.

FEL BOVINUM PURIFICATUM.

PURIFIED OX BILE.

Take of Fresh Ox Bile, one pint;
Rectified Spirit, two pints.

Mix the Bile and the Spirit by agitation in a bottle, and set aside for twelve hours until the sediment subsides. Decant the clear solution, and evaporate in a porcelain capsule on a water bath, until the residue acquires the consistence of a vegetable extract.

FERRI ARSENIAS.

ARSENIATE OF IRON.

Take of Sulphate of Iron, nine ounces ;
 Arseniate of Soda, dried at 300°, four
 ounces ;
 Acetate of Soda, three ounces ;
 Boiling Distilled Water, a sufficiency.

Dissolve the Arseniate and Acetate of Soda in two pints, and the Sulphate of Iron in three pints of the Water, mix the two solutions, collect the white precipitate which forms, on a calico filter, and wash until the washings cease to be affected by a dilute solution of chloride of barium. Squeeze the washed precipitate between folds of strong linen in a screw press, and dry it on porous bricks in a warm air chamber whose temperature shall not exceed 100°.

FERRI CARBONAS SACCHARATA.

SACCHARATED CARBONATE OF IRON.

Take of Sulphate of Iron, two ounces ;
 Carbonate of Soda, two ounces and a half ;
 Boiling Distilled Water, two gallons ;
 Refined Sugar, one ounce.

Dissolve the Sulphate of Iron and the Carbonate of Soda each in half a gallon of the Water, and mix the two solutions with brisk stirring in a deep cylindrical vessel, which is then to be covered as accurately as possible. Set the mixture by for twenty-four hours, and from the precipitate, which has subsided, separate the supernatant solution by a siphon. Pour on the remainder of the Water, stir well, and, after subsidence, again remove the clear solution. Collect the resulting carbonate on a calico filter, and, having first subjected it to expression, rub it with the Sugar in a porcelain mortar. Finally dry the mixture at a temperature not exceeding 212° .

FERRI ET AMMONIÆ CITRAS.

CITRATE OF IRON AND AMMONIA.

Take of Solution of Persulphate of Iron, eight fluid ounces ;

Solution of Ammonia, fourteen fluid ounces,
or a sufficiency ;

Citric Acid, in crystals, five ounces ;

Distilled Water, half a gallon.

Add the Persulphate of Iron to two pints of the Distilled Water, and gradually pour the dilute solution

into the Solution of Ammonia, stirring well for a few minutes; collect on a calico filter the hydrated peroxide of iron which precipitates, and wash it with distilled water until the filtrate ceases to become turbid on the addition of chloride of barium. Dissolve the Citric Acid in the remainder of the Water, and digest the solution at a boiling heat on the oxide of iron. Make the liquid neutral by the addition of Solution of Ammonia, evaporate it to the consistence of syrup, and dry it in thin layers, on flat porcelain or glass plates, at a temperature not exceeding 140°. Remove the dry salt in flakes, and keep it in stoppered bottles.

FERRI ET QUININÆ CITRAS.

CITRATE OF IRON AND QUINIA.

Take of Solution of Persulphate of Iron, three fluid ounces;

Sulphate of Iron, one ounce;

Distilled Water, a sufficiency;

Solution of Soda, thirty-six fluid ounces;

Citric Acid, in crystals, two ounces and a quarter;

Sulphate of Quinia, three hundred and eighty grains;

Dilute Hydrochloric Acid, a sufficiency;

Solution of Chloride of Barium, a sufficiency;

Solution of Ammonia, a sufficiency.

Add the Solution of Persulphate of Iron to the Sulphate of Iron dissolved in ten fluid ounces of the Water; mix well, and pour the mixture into the Solution of Soda with constant stirring. Collect the precipitate on a calico filter, and wash with Distilled Water, until the liquid which passes through ceases to give a precipitate with chloride of barium.

Dissolve the Citric Acid in twenty fluid ounces of the Distilled Water, and having then added the washed precipitate, digest the mixture on a water bath, with repeated stirring, until a solution is obtained.

In eight fluid ounces of the Water acidulated with a little of the Dilute Hydrochloric Acid dissolve the Sulphate of Quinia, add sufficient of the Solution of Chloride of Barium to precipitate the sulphuric acid, and filter, and having treated the solution with a slight excess of Ammonia, collect the precipitate on a paper filter, and wash it with Distilled Water, until nitrate of silver dropped into the filtrate gives but a very slight precipitate.

Transfer the washed quinia to the capsule containing the citrate of iron, and digest on a water bath, until the alkaloid is dissolved. Lastly, let this solution be evaporated to the consistence of syrup, and dried in thin layers, on flat porcelain or glass plates, at a temperature below 140° , and let the residue be removed in flakes, and preserved in stoppered bottles.

FERRI IODIDUM.

IODIDE OF IRON.

Take of Fine Iron Wire, one ounce and a half;
Iodine, three ounces;
Distilled Water, fifteen fluid ounces.

Introduce the Iodine, Iron, and twelve ounces of the Water into a flask, and having heated the mixture gently for about ten minutes, raise the heat and boil until the solution loses its red colour. Pass the solution through a small paper filter into a dish of polished iron, washing the filter with the remainder of the Water, and boil down until a drop of the solution taken out on the end of an iron wire solidifies on cooling. The liquid should now be poured out on a porcelain dish, and, as soon as it has solidified, should be broken into fragments, and enclosed in a stoppered bottle.

FERRI OXIDUM MAGNETICUM.

MAGNETIC OXIDE OF IRON.

Take of Sulphate of Iron, six ounces;
Sulphuric Acid, three fluid drachms;
Nitric Acid, two fluid drachms;

Solution of Soda, fifty-eight fluid ounces, or
a sufficiency ;

Distilled Water, a sufficiency.

Add the Sulphuric Acid to five fluid ounces of the Water, and with the aid of heat dissolve in the mixture four ounces of the Sulphate of Iron. Mix the Nitric Acid with two fluid ounces of the Water, and, having added the dilute acid to the solution of sulphate of iron, concentrate by boiling until, on the sudden disengagement of ruddy vapours, the liquid passes from a dark to a red colour. To the solution thus obtained add the two remaining ounces of Sulphate of Iron, first dissolved in half a pint of Distilled Water. Mix well, add to the liquid the Solution of Soda, and having boiled for five minutes in an iron vessel, collect the precipitate on a calico filter, and wash it with boiling Distilled Water, until the liquid which passes through ceases to give a precipitate when allowed to drop into a solution of chloride of barium. Lastly, dry the precipitate without heat in a confined portion of air over a capsule containing sulphuric acid, and enclose it in a stoppered bottle.

FERRI PEROXIDUM.

PEROXIDE OF IRON.

Take of Hydrated Peroxide of Iron, four ounces.

Place the Peroxide of Iron in a stove or oven until it becomes dry to the touch; and then expose it to a heat of 212° until it ceases to lose weight. Lastly, reduce it to a fine powder, and preserve it in a bottle.

FERRI PEROXIDUM HYDRATUM.

HYDRATED PEROXIDE OF IRON.

Take of Solution of Persulphate of Iron, four fluid ounces;

Solution of Soda, thirty-three fluid ounces,
or a sufficiency;

Distilled Water, one pint.

Add the Persulphate of Iron to the Distilled Water, and gradually pour the dilute solution into the Solution of Soda, stirring well for a few minutes; collect the precipitate on a calico filter, and wash it with distilled water, until the filtrate ceases to give a precipitate with chloride of barium. Lastly, enclose the precipitate, without drying it, in a porcelain pot whose lid is made tight by a luting of lard.

This preparation should be recently made.

FERRI PHOSPHAS.

PHOSPHATE OF IRON.

Take of Sulphate of Iron, three ounces ;
Phosphate of Soda, two ounces and a half ;
Acetate of Soda, one ounce ;
Boiling Distilled Water, four pints.

Dissolve the Sulphate of Iron in one half of the Water, and the Phosphate and Acetate of Soda in the remaining half. Mix the two solutions, and, after careful stirring, transfer the precipitate to a calico filter, and wash it with hot distilled water, till the filtrate ceases to give a precipitate with chloride of barium. Finally dry on porous bricks in a stove whose temperature does not exceed 100°. Preserve the dried salt in a stoppered bottle.

FERRI SULPHAS.

SULPHATE OF IRON.

Take of Iron Wire, four ounces ;
Sulphuric Acid, four fluid ounces ;
Distilled Water, one pint and a half.

Pour the Water on the Iron placed in a porcelain capsule, add the Sulphuric Acid, and when the disengagement of gas has nearly ceased, boil for ten minutes. Filter now through paper, and, after the lapse of twenty-four hours, separate the crystals which have been deposited from the solution. Let these be dried on filtering paper placed on porous bricks, and preserved in a stoppered bottle.

FERRI SULPHAS EXSICCATA.

DRIED SULPHATE OF IRON.

Take of Sulphate of Iron, four ounces.

Expose the Sulphate of Iron in a porcelain capsule to a moderate heat, which may be finally raised to 400° , until aqueous vapour ceases to be given off. Reduce the residue to a fine powder, and preserve it in a stoppered bottle.

FERRI SULPHAS GRANULATA.

GRANULATED SULPHATE OF IRON.

Take of Iron Wire, four ounces ;
Sulphuric Acid, four fluid ounces ;
Distilled Water, one pint and a half ;
Rectified Spirit, eight fluid ounces.

Pour the Water on the Iron placed in a porcelain capsule, add the Sulphuric Acid, and when the disengagement of gas has nearly ceased, boil for ten minutes, and then filter the solution into a jar containing the Spirit, stirring the mixture so that the salt shall separate in minute granular crystals. Let these, deprived by decantation of adhering liquid, be transferred on filtering paper to porous bricks, and dried by exposure to the atmosphere. They should be preserved in a stoppered bottle.

FERRUM REDACTUM.

REDUCED IRON.

Take of Peroxide of Iron, one ounce ;
Zinc, granulated, a sufficiency ;
Sulphuric Acid of Commerce, a sufficiency ;
Chloride of Calcium, a sufficiency.

Introduce the Peroxide of Iron into a gun-barrel, confining it to the middle part of the tube by plugs of asbestos. Pass the gun-barrel through a furnace, and when it has been raised to a strong red heat, cause it to be traversed by a stream of hydrogen gas developed by the action on the Zinc of some of the Sulphuric Acid diluted with eight times its volume of water. The gas before entering the gun-barrel must be rendered quite dry by being made to pass first

through the remainder of the Sulphuric Acid, and then through a tube eighteen inches long, packed with minute fragments of the Chloride of Calcium. The farther end of the gun-barrel is to be connected by a cork with a bent tube dipping under water; and when the hydrogen is observed to pass through the water at the same rate that it bubbles through the Sulphuric Acid, the furnace is to be allowed to cool down to the temperature of the atmosphere, the current of hydrogen being still continued. The reduced iron is then to be withdrawn, and enclosed in a dry stoppered bottle.

FERRUM TARTARATUM.

TARTARATED IRON.

Take of Solution of Persulphate of Iron, four fluid ounces;

Solution of Soda, two pints, or a sufficiency;

Acid Tartrate of Potash, in powder, two ounces;

Distilled Water, a sufficiency.

Add the Persulphate of Iron to a pint of Distilled Water, and gradually pour the dilute solution into the Solution of Soda, stirring well for a few minutes; then collect the precipitate on a calico filter, and wash it with Distilled Water until the filtrate ceases to become

turbid on the addition of chloride of barium. To the Acid Tartrate of Potash and thirty ounces of Distilled Water placed in a capsule add the precipitate, and digest the mixture with repeated stirring for six hours, at a heat which must be carefully prevented from rising above 140° . After the solution has cooled down to the temperature of the atmosphere, decant it off any undissolved precipitate, evaporate it to the consistence of syrup, and, having poured it in a thin layer on flat porcelain or glass plates, evaporate it to dryness at a temperature not exceeding 140° . Lastly, remove the dried salt in flakes, and preserve it in stoppered bottles.

HYDRARGYRI IODIDUM RUBRUM.

RED IODIDE OF MERCURY.

Take of Corrosive Sublimate, four ounces ;
Iodide of Potassium, five ounces ;
Boiling Distilled Water, four pints.

Dissolve the Corrosive Sublimate in three pints, and the Iodide of Potassium in the remainder of the Water, and mix the two solutions. When the temperature of the mixture has fallen to that of the atmosphere, decant the supernatant liquor from the precipitate, and, having collected the latter on a filter, wash it twice with cold distilled water, and dry it at a temperature not exceeding 212° .

HYDRARGYRI IODIDUM VIRIDE.

GREEN IODIDE OF MERCURY.

Take of Mercury, by weight, one ounce ;

Iodine, two hundred and seventy-eight grains ;

Rectified Spirit, a sufficiency.

Rub the Iodine and Mercury in a porcelain mortar, occasionally moistening the mixture with a few drops of the Spirit, and continue the trituration until metallic globules are no longer visible, and the whole assumes a green colour. The product thus obtained should be dried in a dark room, on filtering paper, by simple exposure to the air, and preserved in an opaque bottle.

HYDRARGYRI OXIDUM RUBRUM.

RED OXIDE OF MERCURY.

Take of Mercury, by weight, eight ounces ;

Nitric Acid, three fluid ounces ;

Water, two fluid ounces.

Dissolve half the Mercury in the Nitric Acid diluted with the Water, evaporate the solution to dryness, and

with the dry salt thus obtained, triturate the remainder of the Mercury until the two are uniformly blended together. Heat the mixture in a porcelain capsule with repeated stirring, until acid vapours cease to be evolved, and, when cold, enclose the product in a bottle.

HYDRARGYRUM.

MERCURY.

Take of Mercury of Commerce, three pounds ;
Hydrochloric Acid, three fluid drachms ;
Distilled Water, a sufficiency.

Place the Commercial Mercury in a glass retort or iron bottle, and applying heat cause two pounds and a half of the metal to distil over into a flask employed as a receiver. Boil on this for five minutes the Hydrochloric Acid diluted with nine fluid drachms of Distilled Water, and having, by repeated affusions of Distilled Water and decantations, removed every trace of acid, let the mercury be transferred to a porcelain capsule, and dried first by filtering paper, and finally on a water bath.

HYDRARGYRUM AMMONIATUM.

AMMONIATED MERCURY.

Take of Corrosive Sublimate, three ounces ;
Solution of Ammonia, four fluid ounces ;
Distilled Water, three pints.

Dissolve the Corrosive Sublimate in the Water with the aid of a moderate heat ; mix the solution with the Ammonia, constantly stirring ; collect the precipitate on a filter, and wash it well with cold Distilled Water until the liquid which passes through ceases to give a precipitate when dropped into a solution of nitrate of silver acidulated by nitric acid. Lastly, dry the product at a temperature not exceeding 212°.

HYDRARGYRUM CORROSIVUM SUBLIMATUM.

CORROSIVE SUBLIMATE.

Take of Sulphate of Mercury, twenty ounces ;
Chloride of Sodium, dried, ten ounces ;
Black Oxide of Manganese, in fine powder,
one ounce.

Reduce the Sulphate of Mercury and the Chloride of

Sodium each to fine powder, and having mixed them and the Oxide of Manganese thoroughly by trituration in a mortar, place the mixture in a tall matrass of green glass, and by a regulated heat applied through the intervention of sand, let the corrosive sublimate be sublimed. The matrass must now be broken in order to remove the sublimate, which should be kept in jars or bottles impervious to light.

HYDRARGYRUM CUM CRETA.

MERCURY AND CHALK.

Take of Mercury, by weight, one ounce ;
Prepared Chalk, two ounces.

Rub the Mercury and Chalk in a porcelain mortar until metallic globules cease to be visible to the naked eye, and the mixture acquires an uniform grey colour.

INFUSUM ANTHEMIDIS.

INFUSION OF CHAMOMILE.

Take of Chamomile Flowers, half an ounce ;
Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for fifteen minutes, and strain.

INFUSUM AURANTII.

INFUSION OF ORANGE PEEL.

Take of Bitter Orange Peel, cut small, half an ounce ;
Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for fifteen minutes, and strain.

INFUSUM BUCCO.

INFUSION OF BUCHU.

Take of Buchu, bruised, half an ounce ;
Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for one hour, and strain.

INFUSUM CALUMBÆ.

INFUSION OF CALUMBO.

Take of Calumbo, in coarse powder, half an ounce ;
Cold Distilled Water, ten fluid ounces.

Macerate for one hour, and strain.

INFUSUM CARYOPHYLLI.

INFUSION OF CLOVES.

Take of Cloves, bruised, a quarter of an ounce ;
Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for half an hour, and strain.

INFUSUM CASCARILLÆ.

INFUSION OF CASCARILLA.

Take of Cascarilla, in coarse powder, one ounce ;
Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for one hour, and strain.

INFUSUM CATECHU.

INFUSION OF CATECHU.

Take of Catechu, in coarse powder, one hundred
and sixty grains ;

Cinnamon, bruised, thirty grains ;
Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for half an hour, and strain.

INFUSUM CHIRATÆ.

INFUSION OF CHIRETTA.

Take of Chiretta, bruised, a quarter of an ounce ;
Distilled Water, at 120°, ten fluid ounces.

Infuse in a covered vessel, for half an hour, and strain.

INFUSUM CINCHONÆ FLAVÆ.

INFUSION OF YELLOW CINCHONA.

Take of Yellow-Cinchona Bark, in coarse powder,
half an ounce ;
Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for two hours, and filter through paper.

INFUSUM CUSPARIÆ.

INFUSION OF CUSPARIA.

Take of Cusparia, in coarse powder, half an ounce ;
Distilled Water at 120°, ten fluid ounces.

Infuse in a covered vessel, for two hours, and strain.

INFUSUM CUSSO.

INFUSION OF KOUSSO.

Take of Koussou, in coarse powder, a quarter of an ounce ;

Boiling Distilled Water, four fluid ounces.

Infuse in a covered vessel, for fifteen minutes, without straining.

INFUSUM DIGITALIS.

INFUSION OF DIGITALIS.

Take of Digitalis, dried, thirty grains ;

Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for one hour, and strain.

This Infusion has half the strength of Infusum Digitalis, *Ed. Dub.*

INFUSUM DULCAMARÆ.

INFUSION OF DULCAMARA.

Take of Dulcamara, bruised, one ounce ;
Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for one hour, and strain.

INFUSUM ERGOTÆ.

INFUSION OF ERGOT.

Take of Ergot, in coarse powder, a quarter of an ounce ;

Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for half an hour, and strain.

INFUSUM GENTIANÆ COMPOSITUM.

COMPOUND INFUSION OF GENTIAN.

Take of Gentian, sliced, a quarter of an ounce ;
Bitter-Orange Peel, bruised, thirty grains ;

Coriander, thirty grains ;
Proof Spirit, two fluid ounces ;
Cold Distilled Water, eight fluid ounces.

Pour the Spirit upon the dry ingredients, in a covered vessel, in two hours add the Water, and in two hours more strain through calico.

INFUSUM KRAMERLÆ.

INFUSION OF RHATANY.

Take of Rhatany, bruised, half an ounce ;
Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for one hour, and strain.

INFUSUM LINI.

INFUSION OF LINSEED.

Take of Linseed, one hundred and sixty grains ;
Fresh Liquorice Root, sliced, sixty grains ;
Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for four hours, and strain through calico.

INFUSUM LUPULI.

INFUSION OF HOP.

Take of Hops, half an ounce ;

Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for two hours, and strain.

INFUSUM MATICÆ.

INFUSION OF MATICO.

Take of Matico, cut small, half an ounce ;

Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for half an hour, and strain.

INFUSUM QUASSIÆ.

INFUSION OF QUASSIA.

Take of Quassia, in chips, sixty grains ;

Cold Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for half an hour, and strain.

INFUSUM RHEI.

INFUSION OF RHUBARB.

Take of Rhubarb, in thin slices, a quarter of an ounce ;

Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for one hour, and strain.

INFUSUM ROSÆ ACIDUM.

ACID INFUSION OF ROSES.

Take of Red-Rose Petals, a quarter of an ounce ;

Dilute Sulphuric Acid, one fluid drachm ;

Boiling Distilled Water, ten fluid ounces.

Add the Acid to the Water, infuse the Petals in the mixture in a covered vessel, for half an hour, and strain.

INFUSUM SENEGÆ.

INFUSION OF SENEGA.

Take of Senega, bruised, half an ounce ;

Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for one hour, and strain.

INFUSUM SENNÆ.

INFUSION OF SENNA.

Take of Senna, half an ounce ;
Ginger, sliced, thirty grains ;
Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for one hour, and strain.

INFUSUM SERPENTARIÆ.

INFUSION OF SERPENTARY.

Take of Serpentry, a quarter of an ounce ;
Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for two hours, and strain.

INFUSUM UVÆ URSI.

INFUSION OF BEARBERRY.

Take of Bearberry Leaves, half an ounce ;
Boiling Distilled Water, ten fluid ounces

Infuse in a covered vessel, for two hours, and strain through calico.

INFUSUM VALERIANÆ.

INFUSION OF VALERIAN.

Take of Valerian, bruised, one hundred and twenty grains ;

Boiling Distilled Water, ten fluid ounces.

Infuse in a covered vessel, for one hour, and strain.

IODUM.

IODINE.

Take of Iodine of Commerce, one ounce.

Introduce the Commercial Iodine into a porcelain capsule of a circular shape, cover this as accurately as possible with a glass matrass filled with cold water, and apply to the capsule the heat of boiling water for twenty minutes. Let the matrass be now removed, and should colourless acicular prisms of a pungent odour be found attached to its bottom, let them be separated from it. This being done the matrass is to be restored to its previous position, and a gentle and steady heat (that of a gas lamp answers well) applied, so as to sublime the whole of the iodine. Upon now allowing the capsule to cool, and lifting off the matrass, the purified product will be found attached to the bottom of the latter. When separated it should be immediately enclosed in a bottle furnished with an accurately ground stopper.

JALAPÆ RESINA.

RESIN OF JALAP.

Take of Jalap, in coarse powder, eight ounces ;
Rectified Spirit, a sufficiency ;
Distilled Water, a sufficiency.

Macerate the Jalap with sixteen fluid ounces of the Spirit in a covered vessel, at a gentle heat, for twenty-four hours ; then transfer to a percolator, and, when the tincture ceases to pass, pour into the percolator successive portions of Spirit until the jalap is exhausted. Add to the tincture four fluid ounces of the Water, and distil off the spirit by a water bath. Remove the residue while hot to an open dish, and allow it to become cold. Pour off the supernatant fluid from the resin, wash this two or three times with hot water, and dry it on a porcelain plate by a stove or water bath.

LINIMENTUM ACONITI.

LINIMENT OF ACONITE.

Take of Aconite Root, in powder, twenty ounces ;
Camphor, one ounce ;
Rectified Spirit, thirty fluid ounces, or a
sufficiency.

Moisten the Aconite Root with a portion of the Spirit, and macerate for seven days : then percolate into a receiver containing the Camphor, until the product amounts to one pint.

LINIMENTUM AMMONIÆ.

LINIMENT OF AMMONIA.

Take of Solution of Ammonia, one fluid ounce ;
Olive Oil, three fluid ounces.

Mix together with agitation.

LINIMENTUM BELLADONNÆ.

LINIMENT OF BELLADONNA.

Take of Belladonna Root, in powder, twenty ounces ;
Camphor, one ounce ;
Rectified Spirit, thirty fluid ounces, or a
sufficiency.

Moisten the Belladonna Root with a portion of the Spirit, and macerate for seven days : then percolate into a receiver containing the Camphor, until the product amounts to one pint.

LINIMENTUM CALCIS.

LINIMENT OF LIME.

Take of Solution of Lime, two fluid ounces ;

Olive Oil, two fluid ounces.

Mix together with agitation.

LINIMENTUM CAMPHORÆ.

LINIMENT OF CAMPHOR.

Take of Camphor, one ounce ;

Olive Oil, four fluid ounces.

Dissolve the Camphor in the Oil.

LINIMENTUM CAMPHORÆ COMPOSITUM.

COMPOUND LINIMENT OF CAMPHOR.

Take of Camphor, two ounces and a half ;

English Oil of Lavender, one fluid drachm ;

Strong Solution of Ammonia, five fluid ounces ;

Rectified Spirit, fifteen fluid ounces.

Dissolve the Camphor and Oil of Lavender in the Spirit ; then add the Solution of Ammonia gradually with agitation until the whole is dissolved.

LINIMENTUM CANTHARIDIS.

LINIMENT OF CANTHARIDES.

Take of Cantharides, in powder, eight ounces ;
Acetic Acid, four fluid ounces ;
Ether, one pint.

Macerate the Cantharides in the Acetic Acid for twenty-four hours ; then place in a percolator, and allow the Ether to pass slowly through till twenty fluid ounces are obtained. Keep it in a stoppered bottle.

LINIMENTUM CHLOROFORMI.

LINIMENT OF CHLOROFORM.

Take of Chloroform, two fluid ounces ;
Liniment of Camphor, two fluid ounces.

Mix.

LINIMENTUM CROTONIS.

LINIMENT OF CROTON OIL.

Take of Croton Oil, half a fluid ounce ;
Olive Oil, three fluid ounces and a half.

Mix.

LINIMENTUM HYDRARGYRI.

LINIMENT OF MERCURY.

Take of Ointment of Mercury, one ounce ;
Solution of Ammonia, one fluid ounce ;
Liniment of Camphor, one fluid ounce.

Liquefy the Ointment of Mercury in the Liniment of Camphor with a gentle heat ; then add the Solution of Ammonia gradually and mix with agitation.

LINIMENTUM IODI.

LINIMENT OF IODINE.

Take of Iodine, one ounce and a quarter ;
Iodide of Potassium, half an ounce ;
Rectified Spirit, five fluid ounces.

Dissolve the Iodine and Iodide of Potassium in the Spirit.

LINIMENTUM OPII.

LINIMENT OF OPIUM.

Take of Tincture of Opium, two fluid ounces ;
Liniment of Soap, two fluid ounces.

Mix.

LINIMENTUM SAPONIS.

LINIMENT OF SOAP.

Take of Hard Soap, two ounces and a half;
Camphor, one ounce and a quarter;
English Oil of Rosemary, three fluid
drachms;
Rectified Spirit, eighteen fluid ounces;
Distilled Water, two fluid ounces.

Mix the Water with the Spirit, and add the Oil of Rosemary, the Soap, and the Camphor. Digest at a temperature not exceeding 70° with occasional agitation until all are dissolved.

LINIMENTUM TEREBINTHINÆ.

LINIMENT OF TURPENTINE.

Take of Oil of Turpentine, five fluid ounces;
Ointment of Resin, eight ounces.

Melt the Ointment of Resin, then add the Oil of Turpentine gradually, and stir until a uniform liniment is obtained.

LINIMENTUM TEREBINTHINÆ ACETICUM.

LINIMENT OF TURPENTINE AND ACETIC ACID.

Take of Oil of Turpentine, one fluid ounce ;
Acetic Acid, one fluid ounce ;
Liniment of Camphor, one fluid ounce.

Mix.

LIQUOR AMMONIÆ.

SOLUTION OF AMMONIA.

Take of Strong Solution of Ammonia, one pint ;
Distilled Water, two pints.

Mix, and preserve in a stoppered bottle.

Tests.—Specific gravity 0·959. One fluid drachm requires for neutralization 30·8 measures of the volumetric solution of oxalic acid.

LIQUOR AMMONIÆ ACETATIS.

SOLUTION OF ACETATE OF AMMONIA.

Take of Strong Solution of Ammonia, three fluid ounces and a half, or a sufficiency ;
Acetic Acid, ten fluid ounces, or a sufficiency.

Mix gradually, and if the product is not neutral to test papers, make it so by the addition of the proper quantity of either liquid.

LIQUOR AMMONIÆ FORTIOR.

STRONG SOLUTION OF AMMONIA.

Take of Hydrochlorate of Ammonia, in coarse powder, three pounds ;
Slaked Lime, four pounds ;
Distilled Water, thirty-two fluid ounces.

Mix the Lime with the Hydrochlorate of Ammonia, and introduce the mixture into an iron bottle placed in a metal pot surrounded by sand. Connect the iron tube, which screws air-tight into the bottle in the usual manner, by corks, glass tubes, and caoutchouc collars, with a Woulf's bottle capable of holding a pint ; connect this with a second Woulf's bottle of the same size, the second bottle with a matrass of the capacity of three pints in which twenty-two ounces of the Distilled Water are placed, and the matrass, by means of a tube bent twice at right angles, with an ordinary bottle containing the remaining ten ounces of Distilled Water. Bottles 1 and 2 are empty, and the latter and the matrass which contains the twenty-two ounces of distilled water are furnished each with a siphon safety tube charged with a very short column of

mercury. The heat of a fire, which should be very gradually raised, is now to be applied to the metal pot, and continued until bubbles of condensible gas cease to escape from the extremity of the glass tube which dips into the water of the matrass. The process being terminated the matrass will contain about forty-three fluid ounces of Strong Solution of Ammonia.

Bottles 1 and 2 will now include, the first about sixteen, the second about ten fluid ounces of a coloured ammoniacal liquid. Place this in a flask closed by a cork, which should be perforated by a siphon safety tube containing a little mercury, and also by a second tube bent twice at right angles, and made to pass to the bottom of the terminal bottle used in the preceding process. Apply heat to the flask until the coloured liquid it contains is reduced to three fourths of its original bulk. The product now contained in the terminal bottle will be nearly of the strength of Solution of Ammonia, and may be made exactly so by the addition of the proper quantity of Distilled Water or of Strong Solution of Ammonia.

LIQUOR ANTIMONII TERCHLORIDI.

SOLUTION OF TERCHLORIDE OF ANTIMONY.

Take of Prepared Sulphuret of Antimony, one pound ;

Commercial Hydrochloric Acid, four pints.

Place the Sulphuret of Antimony in a porcelain vessel; pour upon it the Hydrochloric Acid, and, constantly stirring, apply to the mixture, beneath a flue with a good draught, a gentle heat, which must be gradually augmented as the evolution of gas begins to slacken, until the liquid boils. Maintain it at this temperature for fifteen minutes; then remove the vessel from the fire, and filter the liquid through calico into another vessel, returning what passes through first, that a perfectly clear solution may be obtained. Boil this down to the bulk of two pints, and preserve it in a stoppered bottle.

LIQUOR ARSENICALIS.

ARSENICAL SOLUTION.

Take of Arsenious Acid, eighty grains;
Carbonate of Potash, eighty grains;
Compound Tincture of Lavender, five fluid
drachms;
Distilled Water, a sufficiency.

Place the Arsenious Acid and the Carbonate of Potash in a flask with ten ounces of the Water, and apply heat until a clear solution is obtained. Allow this to cool. Then add the Compound Tincture of Lavender, and as much Distilled Water as will make the bulk one pint.

Tests.—Specific gravity 1·009. One fluid ounce boiled for five minutes with ten grains of bicarbonate of soda and then diluted with six fluid ounces of water to which a little mucilage of starch has been added, does not give with the volumetric solution of iodine a permanent blue colour until eighty-one measures have been added.

LIQUOR ATROPIÆ.

SOLUTION OF ATROPIA.

Take of Atropia, in crystals, four grains ;
Rectified Spirit, one fluid drachm ;
Distilled Water, seven fluid drachms.

Mix the Spirit and the Water, and dissolve the Atropia in the mixture.

LIQUOR CALCIS.

SOLUTION OF LIME.

Take of Slaked Lime, two ounces ;
Distilled Water, one gallon.

Introduce the Lime into a stoppered bottle containing the Water ; and shake well for two or three minutes. After twelve hours the excess of lime will have subsided, and the clear solution may be drawn off with a siphon as it is required for use, or transferred to a green glass bottle furnished with

a well-ground stopper. When the whole of the solution has been withdrawn from the bottle in which it was made, a fresh solution may be obtained by shaking the sediment at the bottom of the bottle with another gallon of Distilled Water ; and if the lime be pure and the bottle accurately stopped, the process may be repeated four or five times.

Test.—Ten fluid ounces require for neutralization at least twenty measures of the volumetric solution of oxalic acid.

LIQUOR CALCIS CHLORATÆ.

SOLUTION OF CHLORINATED LIME.

Take of Chlorinated Lime, one pound ;
Distilled Water, one gallon.

Mix well the Water and the Chlorinated Lime by trituration in a large mortar, and, having transferred the mixture to a stoppered bottle, let it be well shaken several times for the space of three hours. Pour out now the contents of the bottle on a calico filter, and let the solution which passes through be preserved in a stoppered bottle.

Tests.—Specific gravity 1.035. One fluid drachm mixed with twenty grains of iodide of potassium dissolved in four fluid ounces of water, when acidulated with two fluid drachms of hydrochloric acid, gives a red solution which requires for the discharge of its colour forty-six measures of the volumetric solution of hyposulphite of soda.

LIQUOR CALCIS SACCHARATUS.

SACCHARATED SOLUTION OF LIME.

Take of Slaked Lime, one ounce ;
Refined Sugar, in powder, two ounces ;
Distilled Water, one pint.

Mix the Lime and the Sugar by trituration in a mortar. Transfer the mixture to a bottle containing the Water, and having closed this with a cork shake it occasionally for a few hours. Finally separate the clear solution with a siphon, and keep it in a stoppered bottle.

Tests.—Specific gravity 1.052. One fluid ounce requires for neutralization 25.4 measures of the standard solution of oxalic acid, which corresponds to 7.11 grains of lime.

LIQUOR CHLORI.

SOLUTION OF CHLORINE.

Take of Hydrochloric Acid, six fluid ounces ;
Black Oxide of Manganese, in fine powder,
one ounce ;
Distilled Water, thirty-four fluid ounces.

Introduce the Oxide of Manganese into a gas-bottle, and, having poured upon it the Hydrochloric

Acid diluted with two ounces of the Water, apply a gentle heat, and, by suitable tubes, cause the gas, as it is developed, to pass through two ounces of the Water placed in an intermediate small phial, and thence to the bottom of a three-pint bottle containing the remainder of the Water, the mouth of which is loosely plugged with tow. As soon as the chlorine ceases to be developed, let the bottle be disconnected from the apparatus in which the gas has been generated, corked loosely, and shaken until the chlorine is absorbed. Lastly, introduce the solution into a green-glass bottle furnished with a well-fitting stopper, and keep it in a cool and dark place.

LIQUOR FERRI PERCHLORIDI.

SOLUTION OF PERCHLORIDE OF IRON.

Take of Iron Wire, two ounces ;

Hydrochloric Acid, ten fluid ounces ;

Nitric Acid, six fluid drachms ;

Distilled Water, seven fluid ounces.

Dilute the Hydrochloric Acid with five ounces of the Water, and pour the mixture on the Iron Wire in successive portions, applying a gentle heat when the action becomes feeble, so that the whole of the metal may be dissolved. To the Nitric Acid add the two remaining ounces of Water, and having poured the mixture into

the solution of iron, evaporate the whole until the bulk is reduced to ten fluid ounces.

LIQUOR FERRI PERNITRATIS.

SOLUTION OF PERNITRATE OF IRON.

Take of Fine Iron Wire, free from rust, one ounce ;
Nitric Acid, three fluid ounces ;
Distilled Water, a sufficiency.

Dilute the Nitric Acid with sixteen ounces of the Water, introduce the Iron Wire into the mixture, and leave them in contact until the metal is dissolved, taking care to moderate the action, should it become too violent, by the addition of a little more Distilled Water. Filter the solution, and add to it as much Distilled Water as will make its bulk one pint and a half.

LIQUOR HYDRARGYRI NITRATIS ACIDUS.

ACID SOLUTION OF NITRATE OF MERCURY.

Take of Mercury, four ounces ;
Nitric Acid, three fluid ounces and a
quarter ;
Distilled Water, three fluid ounces.

Mix the Nitric Acid with the Water in a flask ; and dissolve the Mercury in the mixture without the

application of heat. Boil gently for fifteen minutes, cool, and preserve the solution in a stoppered bottle.

LIQUOR MORPHIÆ HYDROCHLORATIS.

SOLUTION OF HYDROCHLORATE OF MORPHIA.

Take of Hydrochlorate of Morphia, four grains ;
Dilute Hydrochloric Acid, eight minims ;
Rectified Spirit, two fluid drachms ;
Distilled Water, six fluid drachms.

Mix the Hydrochloric Acid, the Spirit, and the Water, and dissolve the Hydrochlorate of Morphia in the mixture.

This solution contains half as much Morphia as *Liquor Morphicæ Hydrochloratis, Lond.*

LIQUOR PLUMBI SUBACETATIS.

SOLUTION OF SUBACETATE OF LEAD.

Take of Acetate of Lead, five ounces ;
Litharge, in powder, three ounces and a half ;
Distilled Water, one pint, or a sufficiency.

Boil the Acetate of Lead and the Litharge in the Water for half an hour, constantly stirring ; then

filter, and when the liquid is cold add to it more Distilled Water, until the product measures twenty fluid ounces. Keep the clear solution in stoppered bottles.

LIQUOR PLUMBI SUBACETATIS DILUTUS.

DILUTE SOLUTION OF SUBACETATE OF LEAD.

Take of Solution of Subacetate of Lead, two fluid drachms ;

Rectified Spirit, two fluid drachms ;

Distilled Water, nineteen fluid ounces and a half.

Mix, and filter through paper. Keep the clear solution in a stoppered bottle.

LIQUOR POTASSÆ.

SOLUTION OF POTASH.

Take of Carbonate of Potash, one pound ;

Slaked Lime, twelve ounces ;

Distilled Water, one gallon.

Dissolve the Carbonate of Potash in the Water ; and, having heated the solution to the boiling point in a clean iron vessel, gradually mix with it the Slaked Lime ; and continue the ebullition for ten minutes with constant stirring. Then remove the vessel from

the fire; and when by the subsidence of the insoluble matter the supernatant liquor has become perfectly clear, transfer it by means of a siphon to a green-glass bottle furnished with an air-tight stopper.

Tests.—Specific gravity 1·058. One fluid ounce requires for neutralization 48·25 measures of the volumetric solution of oxalic acid. It does not effervesce when added to an excess of dilute hydrochloric acid, nor give a precipitate with solution of lime or oxalate of ammonia. When it is treated with an excess of dilute nitric acid, and evaporated to dryness, the residue forms with water a nearly clear solution, which is only slightly precipitated by chloride of barium and nitrate of silver, and is rendered very slightly turbid by ammonia.

LIQUOR POTASSÆ PERMANGANATIS.

SOLUTION OF PERMANGANATE OF POTASH.

Take of Permanganate of Potash, four grains;
Distilled Water, one fluid ounce.

Dissolve.

LIQUOR SODÆ.

SOLUTION OF SODA.

Take of Carbonate of Soda, twenty-eight ounces
Slaked Lime, twelve ounces;
Distilled Water, one gallon.

Dissolve the Carbonate of Soda in the Water; and, having heated the solution to the boiling point in a clean iron vessel, gradually mix with it the Slaked Lime, and continue the ebullition for ten minutes with constant stirring. Then remove the vessel from the fire; and, when by the subsidence of the insoluble matter the supernatant liquor has become perfectly clear, transfer it by means of a siphon to a green-glass bottle furnished with an air-tight stopper.

Tests.—Specific gravity 1.047. One fluid ounce requires for neutralization forty-seven measures of the volumetric solution of oxalic acid. It does not effervesce when added to an excess of dilute hydrochloric acid, nor give a precipitate with solution of lime or oxalate of ammonia. When it is treated with an excess of dilute nitric acid, and evaporated to dryness, the residue forms with water a clear solution which is rendered turbid by chloride of barium and by nitrate of silver, but not by ammonia.

LIQUOR SODÆ ARSENIATIS.

SOLUTION OF ARSENIATE OF SODA.

Take of Arseniate of Soda (rendered anhydrous by a heat not exceeding 300°), four grains;
Distilled Water, one fluid ounce.

Dissolve.

LIQUOR SODÆ CHLORATÆ.

SOLUTION OF CHLORINATED SODA.

Take of Carbonate of Soda, twelve ounces ;
Chloride of Sodium, four ounces ;
Black Oxide of Manganese, in powder, three
ounces ;
Sulphuric Acid, two fluid ounces and a
half ;
Distilled Water, forty-four fluid ounces.

Reduce the Carbonate of Soda to powder, dissolve it in thirty-six ounces of the Water, and put the solution into a glass vessel. Mix the Chloride of Sodium, and the Oxide of Manganese, place them in a retort, and add to them the Sulphuric Acid, previously mixed with three ounces of the Water, and allowed to cool. Heat the mixture gradually, and pass the evolved chlorine through a wash bottle containing five ounces of the Water, and afterwards into the solution of carbonate of soda. When the disengagement of chlorine has ceased, transfer the solution to a stoppered bottle, and keep it in a cool and dark place.

LIQUOR STRYCHNINÆ.

SOLUTION OF STRYCHNIA.

Take of Strychnia, in crystals, four grains ;
Dilute Hydrochloric Acid, six minims ;
Rectified Spirit, two fluid drachms ;
Distilled Water, six fluid drachms.

Mix the Hydrochloric Acid with four drachms of the Water, and dissolve the Strychnia in the mixture by the aid of heat. Then add the Spirit and the remainder of the Water.

LITHIÆ CITRAS.

CITRATE OF LITHIA.

Take of Carbonate of Lithia, fifty grains ;
Citric Acid, in crystals, ninety grains ;
Warm Distilled Water, one fluid ounce.

Dissolve the Citric Acid in the Water, and add the Carbonate of Lithia in successive portions, applying heat until effervescence ceases, and a perfect solution is obtained. Evaporate by a steam or sand bath till water ceases to escape, and the residue is converted into a viscid liquid. This should be dried in an oven or air chamber at the temperature of about 240° , then rapidly pulverized, and enclosed in a stoppered bottle

MAGNESIA.

MAGNESIA.

Take of Carbonate of Magnesia, four ounces.

Introduce the Carbonate of Magnesia into a Cornish or Hessian crucible closed loosely by a lid, and let this be exposed to a low red heat as long as a little of the powder taken from the centre of the crucible, when cooled and dropped into dilute sulphuric acid, gives rise to effervescence. The product should be preserved in corked bottles.

MAGNESIA LEVIS.

LIGHT MAGNESIA.

Take of Light Carbonate of Magnesia, four ounces.

Introduce the Carbonate of Magnesia into a Cornish or Hessian crucible closed loosely by a lid, and let this be exposed to a low red heat as long as a little of the powder taken from the centre of the crucible, when cooled and dropped into dilute sulphuric acid, gives rise to effervescence. The product should be preserved in corked bottles.

MAGNESIÆ CARBONAS.

CARBONATE OF MAGNESIA.

Take of Sulphate of Magnesia, ten ounces ;
Carbonate of Soda, twelve ounces ;
Boiling Distilled Water, a sufficiency.

Dissolve the Sulphate of Magnesia and the Carbonate of Soda each in a pint of the Water, mix the two solutions, and evaporate the whole to perfect dryness, by means of a sand bath. Digest the residue for half an hour with two pints of the Water, and having collected the insoluble matter on a calico filter, wash it repeatedly with Distilled Water, until the washings cease to give a precipitate with chloride of barium. Finally dry the product at a temperature not exceeding 212°.

MAGNESIÆ CARBONAS LEVIS.

LIGHT CARBONATE OF MAGNESIA.

Take of Sulphate of Magnesia, ten ounces ;
Carbonate of Soda, twelve ounces ;
Distilled Water, a sufficiency.

Dissolve the Sulphate of Magnesia and the Carbonate of Soda each in half a gallon of the Water,

mix the two solutions cold, and boil the mixture in a porcelain dish for fifteen minutes. Transfer the precipitate to a calico filter, and pour upon it repeatedly boiling Distilled Water, until the washings cease to give a precipitate with chloride of barium. Lastly dry by a heat not exceeding 212°.

MEL BORACIS.

BORAX HONEY.

Take of Borax, in fine powder, sixty-four grains ;
Clarified Honey, one ounce.

Mix.

MEL DEPURATUM.

CLARIFIED HONEY.

Take of Honey, five pounds.

Melt the Honey in a water bath, and strain, while hot, through flannel previously moistened with warm water.

MISTURA AMMONIACI.

AMMONIAC MIXTURE.

Take of Ammoniac, in coarse powder, a quarter of
an ounce ;
Distilled Water, eight fluid ounces.

Triturate the Ammoniac with the Water, gradually added, until the mixture assumes a milky appearance, then strain through muslin.

MISTURA AMYGDALÆ.

ALMOND MIXTURE.

Take of Compound Powder of Almonds, two ounces
and a half;

Distilled Water, one pint.

Rub the Powder with a little of the Water into a thin paste, then add the remainder of the Water, and strain through muslin.

MISTURA CREASOTI.

CREASOTE MIXTURE.

Take of Creasote, sixteen minims;

Glacial Acetic Acid, sixteen minims;

Spirit of Juniper, half a fluid drachm;

Syrup, one fluid ounce;

Distilled Water, fifteen fluid ounces.

Mix the Creasote with the Acetic Acid, gradually add the Water, and lastly the Syrup and Spirit of Juniper.

MISTURA CRETÆ.

CHALK MIXTURE.

Take of Prepared Chalk, a quarter of an ounce ;
Gum Arabic, in powder, a quarter of an ounce ;
Syrup, half a fluid ounce ;
Cinnamon Water, seven fluid ounces and a half.

Triturate the Chalk and Gum Arabic with the Cinnamon Water, then add the Syrup and mix.

MISTURA FERRI COMPOSITA.

COMPOUND MIXTURE OF IRON.

Take of Sulphate of Iron, thirty grains ;
Carbonate of Potash, twenty-five grains ;
Myrrh, in powder, sixty grains ;
Refined Sugar, sixty grains ;
Spirit of Nutmeg, one fluid drachm ;
Rose Water, eight fluid ounces.

Triturate the Myrrh and Carbonate of Potash with the Sugar, the Spirit of Nutmeg, and seven ounces of the Rose Water, the latter being gradually added, until

a uniform mixture is obtained. To this add the Sulphate of Iron, previously dissolved in the remaining ounce of Rose Water, and enclose the mixture at once in a bottle which should be tightly corked.

MISTURA GUAIACI.

GUAIAAC MIXTURE.

Take of Guaiac Resin, in powder, half an ounce ;
Refined Sugar, half an ounce ;
Gum Arabic, powdered, a quarter of an ounce ;
Cinnamon Water, one pint.

Triturate the Guaiac with the Sugar and the Gum, adding gradually the Cinnamon Water.

MISTURA SCAMMONII.

SCAMMONY MIXTURE.

Take of Resin of Scammony, four grains ;
Milk, two ounces.

Triturate the Resin of Scammony with a little of the Milk, and continue the trituration, gradually adding the remainder of the milk, until a uniform emulsion is obtained.

MORPHIÆ HYDROCHLORAS.

HYDROCHLORATE OF MORPHIA.

Take of Opium, sliced, one pound ;
Distilled Water, a sufficiency ;
Chloride of Calcium, three quarters of an ounce ;
Solution of Ammonia, a sufficiency ;
Purified Animal Charcoal, a quarter of an ounce ;
Dilute Hydrochloric Acid, two fluid ounces, or a sufficiency.

Macerate the Opium for twenty-four hours with two pints of the Water, and decant. Macerate the residue for twelve hours with two pints of the Water, decant, and repeat the process with the same quantity of the Water, subjecting the insoluble residue to strong pressure. Unite the liquors, evaporate on a water bath to the bulk of one pint, and strain through calico. Pour in now the Chloride of Calcium previously dissolved in four fluid ounces of Distilled Water, and evaporate until the solution is so far concentrated that upon cooling it becomes solid. Envelope the mass in a double fold of strong calico, and subject it to powerful pressure, preserving the dark fluid which exudes. Triturate the squeezed cake with about half a pint of boiling Distilled Water, and, the whole being thrown upon

a paper filter, wash the residue well with boiling Distilled Water. The filtered fluids having been evaporated as before, cooled, and solidified, again subject the mass to pressure; and, if it be still much coloured, repeat this process a third time, the expressed liquids being always preserved. Dissolve the pressed cake in six fluid ounces of boiling Distilled Water; add the Animal Charcoal, and digest for twenty minutes; filter, wash the filter and charcoal with boiling Distilled Water, and to the solution thus obtained add the Solution of Ammonia in slight excess. Let the pure crystalline Morphia which separates as the liquid cools, be collected on a paper filter, and washed with cold Distilled Water until the washings cease to give a precipitate with solution of nitrate of silver acidulated by nitric acid.

From the dark liquids expressed in the above process an additional product may be obtained by diluting them with distilled water, precipitating with solution of potash added in considerable excess, filtering, and supersaturating the filtrate with hydrochloric acid. This acid liquid digested with a little animal charcoal, and again filtered, gives upon the addition of ammonia a small quantity of pure morphia.

Diffuse the pure Morphia, obtained as above, through two fluid ounces of boiling Distilled Water placed in a porcelain capsule kept hot, and add, constantly stirring, the Dilute Hydrochloric Acid, proceeding with caution, so that the morphia may be entirely dissolved, and a

neutral solution obtained. Set aside to cool and crystallize. Drain the crystals, and dry them on filtering paper. By further evaporating the mother liquor, and again cooling, additional crystals are obtained.

MUCILAGO ACACIÆ.

MUCILAGE OF GUM ARABIC.

Take of Gum Arabic, in small pieces, four ounces ;
Distilled Water, six fluid ounces.

Suspend the Gum in a muslin bag under the surface of the Water, in a deep vessel ; after thirty-six hours, squeeze out the fluid remaining in the bag, and mix.

MUCILAGO AMYLI.

MUCILAGE OF STARCH.

Take of Starch, one hundred and twenty grains ;
Distilled Water, ten fluid ounces.

Triturate the Starch with the Water, gradually added, then boil for a few minutes, constantly stirring.

MUCILAGO TRAGACANTHÆ.

MUCILAGE OF TRAGACANTH.

Take of Tragacanth, one hundred grains ;
Boiling Distilled Water, ten fluid ounces.

Macerate for twenty-four hours, then triturate, and express through calico.

OXYMEL.

OXYMEL.

Take of Clarified Honey, forty ounces ;
Acetic Acid, five fluid ounces ;
Distilled Water, five fluid ounces.

Liquefy the Honey by heat, and mix with it the Acetic Acid and Water.

PILULA ALOES BARBADENSIS.

PILL OF BARBADOES ALOES.

Take of Barbadoes Aloes, in powder, two ounces ;
Hard Soap, in powder, one ounce ;
Oil of Caraway, one fluid drachm ;
Confection of Roses, one ounce.

Beat all together, until thoroughly mixed.

PILULA ALOES ET ASSAFŒTIDÆ.

PILL OF ALOES AND ASSAFŒTIDA.

Take of Socotrine Aloes, in powder, one ounce ;
Assafœtida, one ounce ;
Hard Soap, in powder, one ounce ;
Confection of Roses, one ounce.

Beat all together, until thoroughly mixed.

PILULA ALOES ET MYRRHÆ.

PILL OF ALOES AND MYRRH.

Take of Socotrine Aloes, two ounces ;
Myrrh, one ounce ;
Saffron, dried, half an ounce ;
Confection of Roses, two ounces and a half.

Triturate the Aloes, Myrrh, and Saffron together, and sift ; then add the Confection of Roses, and beat together into a uniform mass.

PILULA ALOES SOCOTRINÆ.

PILL OF SOCOTRINE ALOES.

Take of Socotrine Aloes, in powder, two ounces ;
Hard Soap, in powder, one ounce ;

Volatile Oil of Nutmeg, one fluid drachm ;
Confection of Roses, one ounce.

Beat all together, until thoroughly mixed.

PILULA ASSAFŒTIDÆ COMPOSITA.

COMPOUND PILL OF ASSAFŒTIDA.

Synonym.—PILULA GALBANI COMPOSITA, *Lond.*

Take of Assafœtida, two ounces ;
Galbanum, two ounces ;
Myrrh, two ounces ;
Treacle, by weight, one ounce.

Heat all together in a capsule by means of a steam or water bath, and stir the mass until it assumes a uniform consistence.

PILULA CALOMELANOS COMPOSITA.

COMPOUND PILL OF CALOMEL.

Take of Calomel, one ounce ;
Sulphurated Antimony, one ounce ;
Guaiac Resin, in powder, two ounces ;
Castor Oil, one fluid ounce.

Triturate the Calomel with the Antimony, then add the Guaiac Resin and Castor Oil, and beat the whole into a uniform mass.

PILULA CAMBOGIÆ COMPOSITA.

COMPOUND PILL OF GAMBOGE.

Take of Gamboge, one ounce ;
Barbadoes Aloes, one ounce ;
Aromatic Powder, one ounce ;
Hard Soap, in powder, two ounces ;
Syrup, a sufficiency.

Pulverize the Gamboge and Aloes separately, mix them with the Aromatic Powder, add the Soap and afterwards the Syrup ; and beat the whole into a uniform mass.

PILULA COLOCYNTHIDIS COMPOSITA.

COMPOUND PILL OF COLOCYNTH.

Take of Colocynth, in powder, one ounce ;
Barbadoes Aloes, in powder, two ounces ;
Scammony, in powder, two ounces ;
Sulphate of Potash, in powder, a quarter of
an ounce ;
Oil of Cloves, two fluid drachms ;
Distilled Water, a sufficiency.

Mix the Powders, add the Oil of Cloves, and beat into a mass with the aid of the Water.

PILULA COLOCYNTHIDIS ET HYOSCYAMI.

PILL OF COLOCYNTH AND HYOSCYAMUS.

Take of Colocynth, in powder, one ounce ;
Barbadoes Aloes, in powder, two ounces ;
Scammony, in powder, two ounces ;
Sulphate of Potash, in powder, a quarter of
an ounce ;
Oil of Cloves, two fluid drachms ;
Extract of Hyoscyamus, three ounces ;
Distilled Water, a sufficiency.

Mix the Powders, add the Oil of Cloves and the
Extract of Hyoscyamus, and beat into a mass with the
aid of the Water.

PILULA FERRI CARBONATIS.

PILL OF CARBONATE OF IRON.

Take of Saccharated Carbonate of Iron, one ounce ;
Confection of Roses, a quarter of an ounce.

Beat them into a uniform mass.

PILULA FERRI IODIDI.

PILL OF IODIDE OF IRON.

Take of Fine Iron Wire, forty grains ;
Iodine, eighty grains ;

Refined Sugar, in powder, seventy grains ;
Liquorice Root, in powder, one hundred and
forty grains ;
Distilled Water, fifty minims.

Agitate the Iron with the Iodine and the Water in a strong stoppered ounce phial, until the froth becomes white. Pour the fluid upon the Sugar in a mortar, triturate briskly, and gradually add the Liquorice.

PILULA HYDRARGYRI.

MERCURIAL PILL.

Take of Mercury, two ounces ;
Confection of Roses, three ounces ;
Liquorice Root, in fine powder, one ounce.

Rub the Mercury with the Confection of Roses, until metallic globules are no longer visible, then add the Liquorice, and mix the whole well together.

PILULA OPII.

OPIUM PILL.

Synonym.—PILULA SAPONIS COMPOSITA, *Lond. Dub.*

Take of Opium, in fine powder, half an ounce ;
Hard Soap, two ounces ;
Distilled Water, a sufficiency.

Reduce the Soap to a fine powder, add the Opium with the Water, and beat into a uniform mass.

PILULA PLUMBI CUM OPIO.

PILL OF LEAD AND OPIUM.

Take of Acetate of Lead, in fine powder, thirty-six grains ;

Opium, in fine powder, six grains ;

Confection of Roses, six grains.

Beat them into a uniform mass

PILULA RHEI COMPOSITA.

COMPOUND RHUBARB PILL.

Take of Rhubarb, in fine powder, three ounces ;

Socotrine Aloes, in fine powder, two ounces and a quarter ;

Myrrh, in fine powder, one ounce and a half ;

Hard Soap, one ounce and a half ;

English Oil of Peppermint, one fluid drachm and a half ;

Treacle, by weight, four ounces.

Reduce the Soap to a fine powder, and triturate it

with the Rhubarb, Aloes, and Myrrh, then add the Treacle and Oil of Peppermint, and beat the whole into a uniform mass.

PILULA SCILLÆ COMPOSITA.

COMPOUND SQUILL PILL.

Take of Squill, in fine powder, one ounce and a quarter ;

Ginger, in fine powder, one ounce ;

Ammoniac, in powder, one ounce ;

Hard Soap, one ounce ;

Treacle, by weight, two ounces, or a sufficiency.

Reduce the Soap to powder, and triturate it with the Squill, Ginger, and Ammoniac, then add the Treacle, and beat into a uniform mass.

PLUMBI ACETAS.

ACETATE OF LEAD.

Take of Litharge, in fine powder, twenty-four ounces ;

Acetic Acid, two pints, or a sufficiency ;

Distilled Water, one pint.

Mix the Acetic Acid and the Water, add the Litharge, and dissolve with the aid of a gentle heat. Filter, evaporate till a pellicle forms, and set aside to crystallize, adding a little Acetic Acid should the fluid not have a distinctly acid reaction. Drain and dry the crystals on filtering paper, without heat.

PODOPHYLLI RESINA.

RESIN OF PODOPHYLLUM.

Take of Podophyllum, in coarse powder, one pound ;
Rectified Spirit, three pints, or a sufficiency ;
Distilled Water, a sufficiency ;
Hydrochloric Acid, a sufficiency.

Exhaust the Podophyllum with the Spirit by percolation ; place the tincture in a still, and draw off the spirit. Acidulate the Water with one twenty-fourth of its bulk of Hydrochloric Acid, and slowly pour the liquid which remains after the distillation of the tincture into three times its volume of the acidulated Water, constantly stirring. Allow the mixture to stand for twenty-four hours to deposit the resin. Wash the resin on a filter with Distilled Water, and dry it in a stove.

POTASSA CAUSTICA.

CAUSTIC POTASH.

Take of Solution of Potash, two pints.

Boil down the Solution of Potash rapidly in a silver or clean iron vessel, till all ebullition ceases, and a fluid of oily consistence remains. Pour this into proper moulds, and when it has solidified, and while it is still warm, put it into stoppered bottles.

POTASSA SULPHURATA.

SULPHURATED POTASH.

Take of Carbonate of Potash, in powder, ten ounces;
Sublimed Sulphur, four ounces and a half.

Mix the Carbonate of Potash and the Sulphur in a warm mortar, and, having introduced them into a Cornish or Hessian crucible, let this be heated, first gradually until effervescence has ceased, and finally to dull redness, so as to produce perfect fusion. Let the liquid contents of the crucible be then poured out on a clean flagstone, and covered quickly with an inverted porcelain basin so as to exclude the air as completely as possible while solidification is taking place. The solid product thus obtained should, when cold, be broken into fragments, and immediately enclosed in a green-glass bottle, furnished with an air-tight stopper.

POTASSÆ ACETAS.

ACETATE OF POTASH.

Take of Carbonate of Potash, twenty ounces ;
Acetic Acid, two pints, or a sufficiency.

To the Acetic Acid, placed in a thin porcelain basin, add gradually the Carbonate of Potash, filter, acidulate, if necessary, with a few additional drops of the Acid, and, having evaporated to dryness, raise the heat cautiously so as to liquefy the product. Allow the basin to cool, and when the salt has solidified, and while it is still warm, break it in fragments and put it into stoppered bottles.

POTASSÆ BICARBONAS.

BICARBONATE OF POTASH.

Take of Carbonate of Potash, one pound ;
Distilled Water, two pints ;
Hydrochloric Acid of Commerce, one pint
and a half ;
Water, three pints ;
White Marble in fragments, one pound, or a
sufficiency.

Dissolve the Carbonate of Potash in the Distilled Water, and filter the solution into a three-pint bottle, capable of being tightly closed by a cork traversed by

a glass tube sufficiently long to pass to the bottom of the fluid. Introduce the Marble into another bottle, in the bottom of which a few small holes have been drilled, and the mouth of which is closed by a cork also traversed by a glass tube, and place the bottle in a jar of the same height as itself, but of rather larger diameter. Connect the two glass tubes air-tight by a caoutchouc tube. The cork of the bottle containing the carbonate of potash having been placed loosely, and that of the bottle containing the marble tightly, in its mouth, pour into the jar surrounding the latter bottle the Hydrochloric Acid previously diluted with the Water. When Carbonic Acid gas has passed through the potash solution for two minutes so as to expel the whole of the air of the apparatus, fix the cork tightly in the neck of the bottle, and let the process go on for a week. At the end of this time numerous crystals of Bicarbonate of Potash will have formed, which are to be removed, shaken in a capsule with twice their bulk of cold Distilled Water, and, after decantation of the water, drained, and dried on filtering paper by exposure to the air. The mother liquor filtered if necessary, and concentrated to one half, at a temperature not exceeding 110° , will yield more crystals.

The tube immersed in the solution of carbonate of potash, which should have as large a diameter as possible, may require the occasional removal of the crystals formed within it, in order that the process may not be interrupted.

POTASSÆ CHLORAS.

CHLORATE OF POTASH.

Take of Carbonate of Potash, twenty ounces ;
Slaked Lime, fifty-three ounces ;
Distilled Water, a sufficiency ;
Black Oxide of Manganese, eighty ounces ;
Hydrochloric Acid of Commerce, twenty-four pints.

Mix the Lime with the Carbonate of Potash and triturate them with a few ounces of the Water so as to make the mixture slightly moist. Place the Oxide of Manganese in a large retort or flask, and having poured upon it the Hydrochloric Acid, diluted with six pints of water, apply a gentle sand heat, and conduct the Chlorine as it comes over, first through a bottle containing six ounces of water, and then into a large carboy containing the mixture of carbonate of potash and slaked lime. When the whole of the Chlorine has come over, remove the contents of the carboy, and boil them for twenty minutes with seven pints of the Water; filter and evaporate till a film forms on the surface, and set aside to cool and crystallize. The crystals thus obtained are to be purified by dissolving them in three times their weight of boiling Distilled Water and again allowing the solution to crystallize.

POTASSÆ CITRAS.

CITRATE OF POTASH.

Take of Carbonate of Potash, eight ounces, or a sufficiency ;

Citric Acid, in crystals, six ounces, or a sufficiency ;

Distilled Water, two pints.

Dissolve the Citric Acid in the Water, add the Carbonate of Potash gradually, and, if the solution be not neutral, make it so by the cautious addition of the Acid or the Carbonate of Potash. Then filter, and evaporate to dryness, stirring constantly after a pellicle has begun to form, till the salt granulates. Triturate in a dry warm mortar, and preserve the powder in stoppered bottles.

POTASSÆ NITRAS.

NITRATE OF POTASH.

Take of Nitrate of Potash of Commerce, four pounds ;

Distilled Water, five pints, or a sufficiency.

Having dissolved the commercial Nitrate of Potash in two pints of the Water at a boiling temperature, let the heat be withdrawn, and the solution stirred con-

stantly as it cools, in order that the salt may be obtained in minute granular crystals. Separate as much as possible of the uncrystallized solution by decantation and draining, and wash the crystals in a glass or earthenware percolator, with the remainder of the Water, until the liquid which passes through ceases to give a precipitate on being dropped into a solution of nitrate of silver. The contents of the percolator are now to be extracted, and dried in an oven.

POTASSÆ PERMANGANAS.

PERMANGANATE OF POTASH.

Take of Caustic Potash, five ounces ;

Black Oxide of Manganese, in fine powder,
four ounces ;

Chlorate of Potash, three ounces and a
half ;

Dilute Sulphuric Acid, a sufficiency ;

Distilled Water, two pints and a half.

Reduce the Chlorate of Potash to fine powder, and mix it with the Oxide of Manganese ; put the mixture into a porcelain basin, and add to it the Caustic Potash, previously dissolved in four ounces of the Water. Evaporate to dryness on a sand bath, stirring diligently to prevent spurting. Pulverize the mass, put it into a covered Hessian or Cornish crucible, and expose it

to a dull red heat for an hour, or till it has assumed the condition of a semifused mass. Let it cool, pulverize it, and boil with a pint and a half of the Water. Let the insoluble matter subside, decant the fluid, boil again with half a pint of the Water, again decant, neutralize the united liquors accurately with the Dilute Sulphuric Acid, and evaporate till a pellicle forms. Set aside to cool and crystallize. Drain the crystalline mass, boil it in six ounces of the Water, and strain through a funnel the throat of which is lightly obstructed by a little asbestos. Let the fluid cool and crystallize, drain the crystals, and dry them by placing them under a bell jar over a vessel containing sulphuric acid.

POTASSÆ SULPHAS.

SULPHATE OF POTASH.

Take of The Residue of the process for nitric acid,
one pound ;
Slaked Lime, eight ounces ;
Boiling Distilled Water, half a gallon ;
Carbonate of Potash, sixty grains ;
Dilute Sulphuric Acid, six fluid drachms,
or a sufficiency.

Dissolve the Residue of the nitric acid process in the Water, and gradually add to it the Slaked Lime until reddened litmus paper immersed in it is re-

stored to a blue colour. Filter the solution through calico, and, having heated it to the boiling point, add the Carbonate of Potash as long as there is any precipitate. Filter again, add the Dilute Sulphuric Acid, so as to produce a neutral or slightly acid solution, and, having evaporated this till a film forms on the surface, set it by for twenty-four hours. The crystals, which will then have formed, should be dried on filtering paper, and preserved in a bottle.

POTASSÆ TARTRAS.

TARTRATE OF POTASH.

Take of Acid Tartrate of Potash, twenty ounces, or a sufficiency;

Carbonate of Potash, nine ounces and a quarter, or a sufficiency;

Boiling Distilled Water, two pints and a half.

Dissolve the Carbonate of Potash in the Water; add by degrees the Acid Tartrate of Potash, and if, after a few minutes' boiling, the liquid is not neutral to test paper, make it so by the careful addition of more of the Carbonate or of the Acid Tartrate. Then filter, concentrate till a pellicle forms on the surface, and set it aside to cool and crystallize. More crystals may be obtained by evaporating and

cooling the mother liquor. Drain the crystals, dry them by exposure to the air in a warm place, and preserve them in a stoppered bottle.

POTASSII BROMIDUM.

BROMIDE OF POTASSIUM.

Take of Solution of Potash, two pints ;
Bromine, four fluid ounces, or a sufficiency ;
Wood Charcoal, in fine powder, two ounces ;
Boiling Distilled Water, one pint and a half.

Put the Solution of Potash into a glass or porcelain vessel, and add the Bromine in successive portions, with constant agitation, until the mixture has acquired a permanent brown tint. Evaporate to dryness ; reduce the residue to a fine powder, and mix this intimately with the Charcoal. Throw the mixture in small quantities at a time into a red-hot iron crucible, and when the whole has been brought to a state of fusion, remove the crucible from the fire and pour out its contents. When the fused mass has cooled dissolve it in the Water, filter the solution through paper, and set it aside to crystallize. Drain the crystals, and dry them with a gentle heat. More crystals may be obtained by evaporating the mother liquor and cooling. The salt should be kept in a stoppered bottle.

POTASSII IODIDUM.

IODIDE OF POTASSIUM.

Take of Solution of Potash, one gallon ;

Iodine, in powder, twenty-nine ounces, or a sufficiency ;

Wood Charcoal, in fine powder, three ounces ;

Boiling Distilled Water, a sufficiency.

Put the Solution of Potash into a glass or porcelain vessel, and add the Iodine in small quantities at a time with constant agitation, until the solution acquires a permanent brown tint. Evaporate the whole to dryness in a porcelain dish, pulverize the residue, and mix this intimately with the Charcoal. Throw the mixture, in small quantities at a time, into a red-hot iron crucible, and, when the whole has been brought to a state of fusion, remove the crucible from the fire and pour out its contents. When the fused mass has cooled, dissolve it in two pints of boiling Distilled Water, filter through paper, wash the filter with a little boiling Distilled Water, unite the liquids, and evaporate the whole till a film forms on the surface. Set it aside to cool and crystallize. Drain the crystals, and dry them quickly with a gentle heat. More crystals may be obtained by evaporating the mother liquor and cooling. The salt should be kept in a stoppered bottle.

PULVIS AMYGDALÆ COMPOSITUS.

COMPOUND POWDER OF ALMONDS.

Synonyms.—CONFECTIO AMYGDALÆ, *Lond.*

CONSERVA AMYGDALARUM, *Ed.*

Take of Jordan Almonds, eight ounces ;
Refined Sugar, in powder, four ounces ;
Gum Arabic, in powder, one ounce.

Steep the Almonds in cold water until their skins can be easily removed ; and, when blanched, dry them thoroughly with a soft cloth, and rub them lightly in a mortar to a smooth consistence. Mix the Gum and the Sugar ; and, adding them to the pulp gradually, rub the whole to a coarse powder. Keep it in a lightly covered jar.

PULVIS ANTIMONIALIS.

ANTIMONIAL POWDER.

Take of Oxide of Antimony, one ounce ;
Precipitated Phosphate of Lime, two ounces.
Mix them thoroughly.

PULVIS AROMATICUS.

AROMATIC POWDER.

Take of Cinnamon, four ounces ;
Nutmeg, three ounces ;
Saffron, three ounces ;
Cloves, one ounce and a half ;
Cardamoms, freed from their capsules, one
ounce ;
Refined Sugar, twenty-five ounces.

Reduce the ingredients separately to fine powder ;
mix them thoroughly, and pass the powder through a
fine sieve. Keep it in a stoppered bottle.

PULVIS CATECHU COMPOSITUS.

COMPOUND POWDER OF CATECHU.

Take of Catechu, four ounces ;
Kino, two ounces ;
Rhatany, two ounces ;
Cinnamon, one ounce ;
Nutmeg, one ounce.

Reduce them separately to a fine powder ; mix them
thoroughly, and pass the powder through a fine sieve.
Keep it in a stoppered bottle.

PULVIS CRETÆ AROMATICUS.

AROMATIC POWDER OF CHALK.

Synonym.—CONFECTIO AROMATICA, *Lond.*

Take of Prepared Chalk, one pound ;
Aromatic Powder, three pounds.

Mix them thoroughly, and pass the powder through a fine sieve. Keep it in a stoppered bottle.

PULVIS CRETÆ AROMATICUS CUM OPIO.

AROMATIC POWDER OF CHALK AND OPIUM.

Take of Aromatic powder of Chalk, nine ounces and
three quarters ;
Opium, in powder, a quarter of an ounce.

Mix them thoroughly, and pass the powder through a fine sieve. Keep it in a stoppered bottle.

PULVIS IPECACUANHÆ CUM OPIO.

POWDER OF IPECACUAN AND OPIUM.

Synonym.—PULVIS IPECACUANHÆ COMPOSITUS.

Take of Ipecacuan, in powder, half an ounce ;

Opium, in powder, half an ounce ;
Sulphate of Potash, four ounces.

Rub them well together, and pass the powder through a fine sieve. Keep it in a stoppered bottle.

PULVIS JALAPÆ COMPOSITUS.

COMPOUND POWDER OF JALAP.

Take of Jalap, in powder, five ounces ;
Acid Tartrate of Potash, nine ounces ;
Ginger, in powder, one ounce.

Rub them well together, and pass the powder through a fine sieve.

PULVIS KINO CUM OPIO.

POWDER OF KINO AND OPIUM.

Synonym.—PULVIS KINO COMPOSITUS, *Lond.*

Take of Kino, in powder, three ounces and three quarters ;
Opium, in powder, a quarter of an ounce ;
Cinnamon, in powder, one ounce.

Mix them thoroughly, and pass the powder through a fine sieve. Keep it in a stoppered bottle.

PULVIS RHEI COMPOSITUS.

COMPOUND POWDER OF RHUBARB.

Take of Rhubarb, in powder, two ounces ;
Light Magnesia, six ounces ;
Ginger, in powder, one ounce.

Mix them thoroughly, and pass the powder through a fine sieve.

PULVIS SCAMMONII COMPOSITUS.

COMPOUND POWDER OF SCAMMONY.

Take of Scammony, four ounces ;
Jalap, three ounces ;
Ginger, one ounce.

Reduce them separately to fine powder ; mix them thoroughly, and pass the powder through a fine sieve.

PULVIS TRAGACANTHÆ COMPOSITUS.

COMPOUND POWDER OF TRAGACANTH.

Take of Tragacanth, in powder, one ounce ;
Gum Arabic, in powder, one ounce ;
Starch, one ounce ;
Refined Sugar, in powder, three ounces.

Rub them well together.

QUININÆ SULPHAS.

SULPHATE OF QUINIA.

Take of Yellow Cinchona Bark, in coarse powder,
one pound ;

Hydrochloric Acid, three fluid ounces ;

Distilled Water, a sufficiency ;

Solution of Soda, four pints ;

Dilute Sulphuric Acid, a sufficiency.

Dilute the Hydrochloric Acid with ten pints of the Water. Place the Cinchona Bark in a porcelain basin, and add to it as much of the Dilute Sulphuric Acid as will render it thoroughly moist. After maceration, with occasional stirring for twenty-four hours, place the bark in a displacement apparatus, and percolate with the diluted hydrochloric acid, until the solution which drops through is nearly destitute of bitter taste. Into this liquid pour the Solution of Soda, agitate well, let the precipitate completely subside, decant the supernatant fluid, collect the precipitate on a filter, and wash it with cold Distilled Water, until the washings cease to have colour. Transfer the precipitate to a porcelain dish containing a pint of Distilled Water, and applying to this a steam heat gradually add Dilute Sulphuric Acid until very nearly the whole of the precipitate has been dissolved, and a neutral liquid has been obtained. Filter the

solution while hot through paper, wash the filter with boiling Distilled Water, concentrate till a film forms on the surface of the solution, and set it aside to crystallize. The crystals should be dried on filtering paper without the application of heat.

SANTONINUM.

SANTONIN.

Take of Santonica, bruised, one pound ;
Slaked Lime, seven ounces ;
Hydrochloric Acid, a sufficiency ;
Solution of Ammonia, half a fluid ounce ;
Rectified Spirit, fourteen fluid ounces ;
Purified Animal Charcoal, sixty grains ;
Distilled Water, a sufficiency.

Boil the Santonica with a gallon of the Water and five ounces of the Lime, in a copper or tinned iron vessel, for an hour, strain through a stout cloth, and express strongly. Mix the residue with half a gallon of the Water and the rest of the Lime, boil for half an hour, strain and express as before. Mix the strained liquors, let them settle, decant the fluid from the deposit, and evaporate to the bulk of two pints and a half. To the liquor while hot, add, with diligent stirring, the Hydrochloric Acid until the fluid has become slightly and permanently acid, and set it aside for five days that the precipitate may subside. Remove by skimming

any oily matter which floats on the surface, and carefully decant the greater part of the fluid from the precipitate. Collect this on a paper filter, wash it first with cold Distilled Water till the washings pass colourless and nearly free from acid reaction, then with the Solution of Ammonia previously diluted with five fluid ounces of the Water, and lastly with cold Distilled Water till the washings pass colourless. Press the filter containing the precipitate between folds of filtering paper, and dry it with a gentle heat. Scrape the dry precipitate from the filter, and mix it with the Animal Charcoal. Pour on them nine ounces of the Rectified Spirit, digest for half an hour, and boil for ten minutes. Filter while hot, wash the charcoal with an ounce of boiling Spirit, and set the filtrate aside for two days in a cool dark place to crystallize. Separate the mother liquor from the crystals, and concentrate to obtain a further product. Collect the crystals, let them drain, redissolve them in four ounces of boiling Spirit, and let the solution crystallize as before. Lastly dry the crystals on filtering paper in the dark, and preserve them in a bottle protected from light.

SCAMMONIÆ RESINA.

RESIN OF SCAMMONY.

Take of Scammony Root, in coarse powder, eight ounces ;

Rectified Spirit, a sufficiency ;
Distilled Water, a sufficiency.

Macerate the Scammony Root with sixteen fluid ounces of the Spirit in a covered vessel, at a gentle heat, for twenty-four hours ; then transfer to a percolator, and, when the tincture ceases to pass, pour into the percolator successive portions of Spirit until the root is exhausted. Add to the tincture four fluid ounces of the Water, and distil off the spirit by a water bath. Remove the residue while hot to an open dish, and allow it to become cold. Pour off the supernatant fluid from the resin, wash this two or three times with hot water, and dry it on a porcelain plate by a stove or water bath.

SODA CAUSTICA.

CAUSTIC SODA.

Take of Solution of Soda, two pints.

Boil down the Solution of Soda rapidly in a silver or clean iron vessel, until there remains a fluid of oily consistence, a drop of which when removed on a warmed glass rod solidifies on cooling. Pour the fluid on a clean silver or iron plate, and, as soon as it has solidified, break it in pieces, and preserve it in stoppered green-glass bottles.

SODÆ ARSENIAS.

ARSENIATE OF SODA.

Take of Arsenious Acid, ten ounces ;
Nitrate of Soda, eight ounces and a half ;
Dried Carbonate of Soda, five ounces and
a half ;
Boiling Distilled Water, thirty-five fluid
ounces.

Reduce the dry ingredients separately to fine powder, and mix them thoroughly in a porcelain mortar. Put the mixture into a large clay crucible, and cover it with the lid. Expose to a full red heat, till all effervescence has ceased, and complete fusion has taken place. Pour out the fused salt on a clean flagstone, and as soon as it has solidified, and while it is still warm, put it into the boiling Water, stirring diligently. When the salt has dissolved, filter the solution through paper and set it aside to crystallize. Drain the crystals, and, having dried them rapidly on filtering paper, enclose them in stoppered bottles.

SODÆ BICARBONAS.

BICARBONATE OF SODA.

Take of Carbonate of Soda, two pounds ;
Dried Carbonate of Soda, three pounds ;

White Marble, in fragments, four pounds ;
Hydrochloric Acid of Commerce, one gallon ;
Water, two gallons ;
Distilled Water, a sufficiency.

Fill with the Marble a tubulated glass bottle having a few small holes drilled in the bottom, connect the tubulure tightly by a bent tube and corks with an empty two-necked bottle, and connect this with another bottle filled with the Carbonates of Soda well triturated together, and let the tube be long enough to reach the bottom of the bottle. Before fixing the cork in the bottle containing the carbonate of soda, partially immerse the bottle containing the marble in the Hydrochloric Acid previously diluted with the Water and placed in any convenient vessel. When the whole apparatus is filled with carbonic acid gas, fix in tightly the cork of the bottle containing the carbonate of soda, and let the action go on until the gas ceases to be absorbed. Agitate occasionally for half an hour the damp salt which is formed, with half its weight of cold Distilled Water, drain the undissolved portion, and dry it by exposure to the air on filtering paper placed on porous bricks.

SODÆ CARBONAS EXSICCATA.

DRIED CARBONATE OF SODA.

Take of Carbonate of Soda, eight ounces.

Expose the Carbonate of Soda in a porcelain capsule to a rather strong sand heat until the liquid which first forms is converted into a dry cake; and, having rubbed this to powder, enclose it in a stoppered bottle.

SODÆ ET POTASSÆ TARTRAS.

TARTRATE OF SODA AND POTASH.

Take of Acid Tartrate of Potash, in powder, sixteen ounces, or a sufficiency;

Carbonate of Soda, twelve ounces, or a sufficiency;

Boiling Distilled Water, four pints.

Dissolve the Carbonate of Soda in the Water, add gradually the Acid Tartrate of Potash, and, if after being boiled for a few minutes the liquid has an acid or alkaline reaction, add a little Carbonate of Soda or Acid Tartrate of Potash till a neutral solution is obtained. Boil and filter; concentrate the liquor till a pellicle forms on the surface, and set it aside to crystallize. More crystals may be obtained by again evaporating as before.

SODÆ PHOSPHAS.

PHOSPHATE OF SODA.

Take of Bone Ash, in powder, ten pounds ;

Sulphuric Acid of commerce, fifty-six fluid ounces ;

Distilled Water, four gallons and a half, or a sufficiency ;

Carbonate of Soda, sixteen pounds, or a sufficiency.

Place the Bone Ash in a capacious earthenware or leaden vessel, pour on the Sulphuric Acid, and stir with a glass rod, until the whole powder is thoroughly moistened. After twenty-four hours, add gradually and with constant stirring a gallon of the Water ; digest for forty-eight hours, adding Distilled Water from time to time to replace what has evaporated. Add another gallon of the Water, stirring diligently, digest for an hour, filter through calico, and wash what remains on the filter with successive portions of Distilled Water, till it has almost ceased to have an acid reaction. Concentrate the filtrate to a gallon, let it rest for twenty-four hours, and filter again. Heat the filtrate to near the boiling point, add the Carbonate of Soda previously dissolved in two gallons of the Water, till it ceases to form a precipitate and the fluid has acquired

a feeble alkaline reaction. Filter through calico, evaporate the clear liquor till a film forms on the surface, and set it aside to crystallize. More crystals will be obtained by evaporating the mother liquor, a little Carbonate of Soda being added if necessary to maintain its alkalinity.

Dry the crystals rapidly and without heat on filtering paper placed on porous bricks, and preserve them in stoppered bottles.

SPIRITUS ÆTHERIS.

SPIRIT OF ETHER.

Take of Ether, ten fluid ounces ;
Rectified Spirit, one pint.

Mix.

Test.—Specific gravity 0·809.

SPIRITUS ÆTHERIS NITROSI.

SPIRIT OF NITROUS ETHER.

Take of Nitrite of Soda, five ounces ;
Sulphuric Acid, four fluid ounces ;
Rectified Spirit, two pints.

Introduce the Nitrite of Soda into a matrass connected with a condenser ; pour upon it the Spirit and

the Sulphuric Acid, previously mixed ; and distil thirty-five fluid ounces, the receiver being kept very cool.

SPIRITUS AMMONIÆ AROMATICUS.

AROMATIC SPIRIT OF AMMONIA.

Take of Carbonate of Ammonia, eight ounces ;
Strong Solution of Ammonia, four fluid ounces ;
Volatile Oil of Nutmeg, four fluid drachms ;
Oil of Lemon, six fluid drachms ;
Rectified Spirit, six pints ;
Water, three pints.

Mix, and distil seven pints.

Test.—Specific gravity 0·870.

SPIRITUS ARMORACIÆ COMPOSITUS.

COMPOUND SPIRIT OF HORSERADISH.

Take of Horseradish, sliced, twenty ounces ;
Bitter-Orange Peel, dried, twenty ounces ;
Nutmeg, bruised, half an ounce ;
Proof Spirit, one gallon ;
Water, two pints.

Mix, and distil a gallon with a moderate heat.

SPIRITUS CAJUPUTI.

SPIRIT OF CAJUPUT.

Take of Oil of Cajuput, one fluid ounce ;
Rectified Spirit, nine fluid ounces.

Dissolve.

SPIRITUS CAMPHORÆ.

SPIRIT OF CAMPHOR.

Take of Camphor, one ounce ;
Rectified Spirit, nine fluid ounces.

Dissolve.

SPIRITUS CHLOROFORMI.

SPIRIT OF CHLOROFORM.

Take of Chloroform, one fluid ounce ;
Rectified Spirit, nineteen fluid ounces.

Dissolve.

Test.—Specific gravity 0·871.

SPIRITUS JUNIPERI.

SPIRIT OF JUNIPER.

Take of English Oil of Juniper, one fluid ounce ;
Rectified Spirit, nine fluid ounces.

Dissolve.

This Spirit contains about ninety-five times as much Oil of Juniper as Spiritus Juniperi, *Lond.*

SPIRITUS LAVANDULÆ.

SPIRIT OF LAVENDER.

Take of English Oil of Lavender, one fluid ounce ;
Rectified Spirit, nine fluid ounces.

Dissolve.

SPIRITUS MENTHÆ PIPERITÆ.

SPIRIT OF PEPPERMINT.

Take of English Oil of Peppermint, one fluid ounce ;
Rectified Spirit, nine fluid ounces.

Dissolve.

This Spirit contains about forty-seven times as much Oil of Peppermint as Spiritus Menthæ Piperitæ, *Lond.*

SPIRITUS MYRISTICÆ.

SPIRIT OF NUTMEG.

Take of Volatile Oil of Nutmeg, one fluid ounce ;
Rectified Spirit, nine fluid ounces.

Dissolve.

SPIRITUS ROSMARINI.

SPIRIT OF ROSEMARY.

Take of English Oil of Rosemary, one fluid ounce ;
Rectified Spirit, nine fluid ounces.

Dissolve.

This Spirit contains about thirty-one times as much Oil of Rosemary as Spiritus Rosmarini, *Lond.*

SPIRITUS TENUIOR.

PROOF SPIRIT.

Take of Rectified Spirit, five pints ;
Distilled Water, three pints.

Mix.

Test.—Specific gravity 0.920.

STRYCHNIA.

STRYCHNIA.

Take of Nux Vomica, one pound ;
Acetate of Lead, one hundred and eighty
grains ;
Solution of Ammonia, a sufficiency ;
Rectified Spirit, a sufficiency ;
Distilled Water, a sufficiency.

Subject the Nux Vomica for two hours to steam in any convenient vessel ; chop or slice it ; dry it by the vapour bath or hot-air chamber, and immediately grind it in a coffee mill. Digest the powder at a gentle heat for twelve hours with two pints of the Spirit and one of the Water, strain through linen, express strongly and repeat the process twice. Distil off the spirit from the mixed fluid, evaporate the watery residue to about sixteen ounces and filter when cold. Add now the Acetate of Lead, previously dissolved in Distilled Water, so long as it occasions any precipitate ; filter ; wash the precipitate with ten ounces of cold Water, adding the washings to the filtrate ; evaporate the clear fluid to eight ounces, and when it has cooled add the Ammonia in slight excess, stirring thoroughly. Let the mixture stand at the ordinary temperature for twelve hours ; collect the precipitate on a filter, wash it once with a few ounces of cold Distilled Water, dry it on

the vapour bath, and boil it with successive portions of Rectified Spirit, till the fluid scarcely tastes bitter. Distil off most of the spirit, evaporate the residue to the bulk of about half an ounce, and set it aside to cool. Cautiously pour off the yellowish mother liquor (which contains the Brucia of the seeds) from the white crust of Strychnia which adheres to the vessel. Throw the crust on a paper filter, wash it with a mixture of two parts of Rectified Spirit and one of the Water, till the washings cease to become red on the addition of nitric acid; finally, dissolve it by boiling it with an ounce of Rectified Spirit, and set it aside to crystallize. More crystals may be obtained by evaporating the mother liquor.

SUCCUS CONII.

JUICE OF HEMLOCK.

Take of Fresh Leaves of Hemlock, seven pounds;
Rectified Spirit, a sufficiency.

Bruise the Hemlock in a stone mortar; press out the juice; and to every three measures of juice add one of the Spirit. Set aside for seven days, and filter. Keep it in a cool place.

SUCCUS SCOPARII.

JUICE OF BROOM.

Take of Fresh Broom Tops, seven pounds ;
Rectified Spirit, a sufficiency.

Bruise the Broom Tops in a stone mortar ; press out the juice ; and to every three measures of juice, add one of the Spirit. Set aside for seven days, and filter. Keep it in a cool place.

SUCCUS TARAXACI

JUICE OF TARAXACUM.

Take of Dandelion Root, seven pounds ;
Rectified Spirit, a sufficiency.

Bruise the Dandelion Root in a stone mortar ; press out the juice ; and to every three measures of juice add one of the Spirit. Set aside for seven days, and filter. Keep it in a cool place.

SULPHUR PRÆCIPITATUM.

PRECIPITATED SULPHUR.

Take of Sublimed Sulphur, five ounces ;
Slaked Lime, three ounces ;

Hydrochloric Acid, eight fluid ounces, or a sufficiency ;

Distilled Water, a sufficiency.

Heat the Sulphur and Lime, previously well mixed, in a pint of the Water, stirring diligently with a wooden spatula, boil for fifteen minutes, and filter. Boil the residue again in half a pint of the Water and filter. Let the united filtrates cool, dilute with two pints of the Water, and, in an open place or under a chimney, add in successive quantities the Hydrochloric Acid previously diluted with a pint of the Water, until effervescence ceases and the mixture acquires an acid reaction. Allow the precipitate to settle, decant off the supernatant liquid, pour on fresh Distilled Water, and continue the purification by affusion of Distilled Water and subsidence, until the fluid ceases to have an acid reaction and to precipitate with oxalate of ammonia. Collect the precipitated sulphur on a calico filter, wash it once with Distilled Water, and dry it at a temperature not exceeding 120°

SUPPOSITORIA ACIDI TANNICI.

TANNIN SUPPOSITORIES.

Take of Tannic Acid, twenty-four grains ;

Glycerine, twenty minims ;

Prepared Lard, a sufficiency ;

White Wax, a sufficiency.

Melt eighty grains of the Lard and forty grains of the Wax in a water bath, and, when nearly cold, add the Tannic Acid previously well mixed with the Glycerine. When the mixture has solidified, divide the mass into twelve equal portions, to be formed into cones, which are to be allowed to stand till they acquire sufficient firmness. Dip each cone into a mixture of three parts of the Wax and eight of the Lard, kept melted in the water bath, and set aside in a cool place, that the coating may become hard.

SUPPOSITORIA MORPHLÆ.

MORPHIA SUPPOSITORIES.

Take of Hydrochlorate of Morphia, three grains ;
Refined Sugar, thirty grains ;
Prepared Lard, a sufficiency ;
White Wax, a sufficiency.

Melt thirty grains of the Lard and the same quantity of the Wax in a water bath, and, having removed the vessel, mix them thoroughly with the Hydrochlorate of Morphia and the Sugar previously rubbed together. When the mixture has solidified, divide the mass into twelve equal portions, to be formed into cones, which are to be allowed to stand till they acquire sufficient firmness. Dip each cone into a mixture of three parts of Wax and eight of Lard, melted together in

the water bath, and set aside in a cool place that the coating may become hard.

SYRUPUS.

SYRUP.

Take of Refined Sugar, five pounds;
Distilled Water, two pints.

Dissolve the Sugar in the Water with the aid of heat; and add, after cooling, as much Distilled Water as may be necessary to make the weight of the product seven pounds and a half. The specific gravity should be 1.330.

SYRUPUS AURANTII.

SYRUP OF ORANGE PEEL.

Take of Tincture of Orange Peel, one fluid ounce;
Syrup, seven fluid ounces.

Mix.

SYRUPUS AURANTII FLORIS.

SYRUP OF ORANGE FLOWER.

Take of Orange-Flower Water, eight fluid ounces;
Refined Sugar, three pounds;
Distilled Water, sixteen fluid ounces, or a sufficiency.

Dissolve the Sugar in the Distilled Water, by means of heat ; strain, and when nearly cold add the Orange-Flower Water, with a sufficient quantity of Distilled Water, if necessary, to make the product four pounds and a half. The specific gravity should be 1·330.

SYRUPUS FERRI IODIDI.

SYRUP OF IODIDE OF IRON.

Take of Fine Iron Wire, one ounce ;
Iodine, two ounces ;
Refined Sugar, twenty-eight ounces ;
Distilled Water, thirteen fluid ounces.

Prepare a syrup by dissolving the Sugar in ten ounces of the Water with the aid of heat. Digest the Iodine and the Iron Wire in a flask, at a gentle heat, with the remaining three ounces of the Water, till the froth becomes white ; then filter the liquid while still hot into the syrup, and mix. The product should weigh two pounds eleven ounces, and should have the specific gravity 1·385.

SYRUPUS FERRI PHOSPHATIS.

SYRUP OF PHOSPHATE OF IRON.

Take of Granulated Sulphate of Iron, two hundred
and twenty-four grains ;

Phosphate of Soda, two hundred grains ;
Acetate of Soda, seventy-four grains ;
Dilute Phosphoric Acid, five fluid ounces
and a half ;
Refined Sugar, eight ounces ;
Distilled Water, eight fluid ounces.

Dissolve the Sulphate of Iron in four ounces of the Water, and the Phosphate and Acetate of Soda in the remainder ; mix the two solutions, and, after careful stirring, transfer the precipitate to a calico filter, and wash it with Distilled Water, till the filtrate ceases to be affected by chloride of barium. Then press the precipitate strongly between folds of bibulous paper, and add to it the Dilute Phosphoric Acid. As soon as the precipitate is dissolved, filter the solution, add the Sugar, and dissolve without heat. The product should measure exactly twelve fluid ounces.

SYRUPUS HEMIDESMI.

SYRUP OF HEMIDESMUS.

Take of Hemidesmus, bruised, four ounces ;
Refined Sugar, twenty-eight ounces ;
Boiling Distilled Water, one pint.

Infuse the Hemidesmus in the Water, in a covered vessel, for four hours, and strain. Set it by till the sediment subsides ; then decant the clear liquor, add

the sugar, and dissolve by means of a gentle heat. The product should weigh two pounds ten ounces, and should have the specific gravity 1·335.

SYRUPUS LIMONIS.

SYRUP OF LEMONS.

Take of Fresh Lemon Peel, two ounces ;
Lemon Juice, strained, one pint ;
Refined Sugar, two pounds and a quarter.

Add the Sugar and the Lemon Peel to the Lemon Juice in a covered vessel, and dissolve the sugar with the aid of a steam or water bath, then strain. The product should weigh three pounds and a half, and should have the specific gravity 1·340.

SYRUPUS MORI.

SYRUP OF MULBERRIES.

Take of Mulberry Juice, one pint ;
Refined Sugar, two pounds ;
Rectified Spirit, two fluid ounces and a half.

Dissolve the Sugar in the Juice by a gentle heat and set aside for twenty-four hours. Then remove the scum, and pour off the clear liquid from the dregs, if any appear. Lastly, add the Spirit. The product should weigh three pounds six ounces, and should have the specific gravity 1·330.

SYRUPUS PAPAVERIS.

SYRUP OF POPPIES.

Take of Poppy Capsules, bruised and freed from seed, thirty-six ounces ;

Boiling Distilled Water, twenty pints ;

Rectified Spirit, sixteen fluid ounces ;

Refined Sugar, four pounds.

Macerate the Poppy Capsules in the Water, in a water bath, kept hot, for twelve hours. Then evaporate all the water except that absorbed by the capsules, press strongly, and strain. Reduce the strained liquor to three pints ; and, when quite cold, add the Spirit. Mix, and filter. Distil off the spirit, evaporate the remaining liquor to two pints, and then add the Sugar. The product should weigh six pounds and a half, and should have the specific gravity 1.320.

SYRUPUS RHEADOS.

SYRUP OF RED POPPY.

Take of Red-Poppy Petals, thirteen ounces ;

Refined Sugar, two pounds and a quarter ;

Distilled Water, one pint, or a sufficiency ;

Rectified Spirit, two fluid ounces and a half.

Add the Petals gradually to the Water heated in a water bath, frequently stirring, and afterwards, the vessel being removed, macerate for twelve hours. Then press out the liquor, strain, add the Sugar and dissolve by means of heat. When nearly cold, add the Spirit, and as much Distilled Water as may be necessary to make up for loss in the process, so that the product shall weigh three pounds ten ounces, and should have the specific gravity 1·330.

SYRUPUS ROSÆ GALLICÆ.

SYRUP OF RED ROSES.

Take of Dried Red-Rose Petals, two ounces ;
Refined Sugar, thirty ounces ;
Boiling Distilled Water, one pint.

Infuse the Petals in the Water for two hours, squeeze through calico, and filter. Dissolve the Sugar in the liquor by means of heat. The product should weigh two pounds fourteen ounces, and should have the specific gravity 1·335.

SYRUPUS SCILLÆ.

SYRUP OF SQUILL.

Take of Squill, bruised, two ounces and a half ;
Dilute Acetic Acid, one pint ;

Refined Sugar, two pounds ;
Proof Spirit, one fluid ounce and a half.

Digest the Squill in the Dilute Acetic Acid for three days, with a gentle heat ; express, add the Spirit, and filter ; then mix in the Sugar, and dissolve with the aid of heat. The product should weigh three pounds two ounces, and should have the specific gravity 1·330.

SYRUPUS SENNÆ.

SYRUP OF SENNA.

Take of Senna, broken small, sixteen ounces ;
Oil of Coriander, three minims ;
Refined Sugar, twenty-four ounces ;
Distilled Water, five pints, or a sufficiency ;
Rectified Spirit, two fluid ounces.

Digest the Senna in seventy ounces of the Water for twenty-four hours ; press and strain. Digest the marc in thirty ounces of the Water for six hours ; press and strain. Evaporate the mixed liquors to ten fluid ounces, and, when cold, add the Rectified Spirit, previously mixed with the Oil of Coriander. Clarify by filtration, and wash what remains on the filter with Distilled Water, until the washings make up the

filtrate to sixteen fluid ounces. Then add the Sugar, and dissolve by means of a gentle heat.

The product should weigh two pounds ten ounces, and should have the specific gravity 1·310.

SYRUPUS TOLUTANUS.

SYRUP OF TOLU.

Take of Balsam of Tolu, one ounce and a quarter ;
Refined Sugar, two pounds ;
Distilled Water, one pint, or a sufficiency.

Boil the Balsam in the Water for half an hour in a lightly covered vessel, stirring occasionally. Then remove from the fire, and add Distilled Water, if necessary, so that the liquid shall measure sixteen ounces. Filter the solution when cold, add the Sugar, and dissolve with the aid of a steam or water bath. The product should weigh three pounds, and should have the specific gravity 1·330.

SYRUPUS ZINGIBERIS.

SYRUP OF GINGER.

Take of Tincture of Ginger, one fluid ounce ;
Syrup, seven fluid ounces.

Mix with agitation.

TINCTURA ACONITI.

TINCTURE OF ACONITE.

Take of Aconite Root, in fine powder, two ounces
and a half;

Rectified Spirit, one pint.

Macerate the Aconite Root for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Rectified Spirit to make one pint.

This Tincture has one fourth of the strength of *Tinctura Aconiti, Dub.*, and one third of the strength of *Tinctura Aconiti, Lond.*

TINCTURA ALOES.

TINCTURE OF ALOES.

Take of Socotrine Aloes, in coarse powder, half an
ounce;

Extract of Liquorice, one ounce and a half;

Proof Spirit, one pint.

Macerate for seven days, filter the liquor, and add sufficient Proof Spirit to make one pint.

TINCTURA ARNICÆ.

TINCTURE OF ARNICA.

Take of Arnica Root, in fine powder, one ounce ;
Rectified Spirit, one pint.

Macerate the Arnica for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally ; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Rectified Spirit to make one pint.

TINCTURA ASSAFŒTIDÆ.

TINCTURE OF ASSAFŒTIDA.

Take of Assafœtida, in small fragments, two ounces
a half ;
Rectified Spirit, one pint.

Macerate for seven days, strain, filter, and add sufficient Rectified Spirit to make one pint.

TINCTURA AURANTII.

TINCTURE OF ORANGE PEEL.

Take of Bitter-Orange Peel, cut small and bruised,
two ounces ;

Proof Spirit, one pint.

Macerate the Orange Peel for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally ; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA BELLADONNÆ.

TINCTURE OF BELLADONNA.

Take of Belladonna Leaves, in coarse powder, one
ounce ;

Proof Spirit, one pint.

Macerate the leaves for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally ; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the

percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

This Tincture has about half the strength of *Tinctura Belladonnæ*, *Lond. Dub.*

TINCTURA BENZOINI COMPOSITA.

COMPOUND TINCTURE OF BENZOIN.

Take of Benzoin, in coarse powder, two ounces ;
Prepared Storax, one ounce and a half ;
Balsam of Tolu, half an ounce ;
Socotrine Aloes, one hundred and sixty
grains ;
Rectified Spirit, one pint.

Macerate for seven days, filter, and add sufficient Rectified Spirit to make one pint.

TINCTURA BUCCO.

TINCTURE OF BUCHU.

Take of Buchu, bruised, two ounces and a half ;
Proof Spirit, one pint.

Macerate the Buchu for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally ; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the

remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA CALUMBÆ.

TINCTURE OF CALUMBO.

Take of Calumbo, bruised, two ounces and a half;
Proof Spirit, one pint.

Macerate the Calumba for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURÆ CAMPHORÆ CUM OPIO.

CAMPHORATED TINCTURE OF OPIUM.

Synonyms.—TINCTURA CAMPHORÆ COMPOSITA, *Lond.*

TINCTURA OPII CAMPHORATA, *Ed. Dub.*

Take of Opium, in coarse powder, forty grains;
Benzoic Acid, forty grains;

Camphor, thirty grains ;
Oil of Anise, half a fluid drachm ;
Proof Spirit, one pint.

Macerate for seven days, strain, express, and filter,
then add sufficient Proof Spirit to make one pint.

TINCTURA CANNABIS INDICÆ.

TINCTURE OF INDIAN HEMP.

Take of Extract of Indian Hemp, one ounce ;
Rectified Spirit, one pint

Dissolve the Extract of Hemp in the Spirit.

TINCTURA CANTHARIDIS.

TINCTURE OF CANTHARIDES.

Take of Cantharides, in coarse powder, a quarter of
an ounce ;

Proof Spirit, one pint.

Macerate the Cantharides for forty-eight hours, with
fifteen ounces of the Spirit, in a close vessel, agitating
occasionally ; then transfer to a percolator, and when
the fluid ceases to pass, pour into the percolator the
remaining five ounces of the Spirit. As soon as the
percolation is completed, subject the contents of the

percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA CAPSICI.

TINCTURE OF CAPSICUM.

Take of Capsicum, bruised, three quarters of an ounce ;

Rectified Spirit, one pint.

Macerate the Capsicum for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally ; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Rectified Spirit to make one pint.

TINCTURA CARDAMOMI COMPOSITA.

COMPOUND TINCTURE OF CARDAMOMS.

Take of Cardamoms, bruised, a quarter of an ounce

Caraway, bruised, a quarter of an ounce ;

Raisins, freed from their seeds, two ounces ;

Cinnamon, bruised, half an ounce ;

Cochineal, in powder, sixty grains ;
Proof Spirit, one pint.

Macerate the Cardamoms, and the other ingredients, for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally ; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA CASCARILLÆ.

TINCTURE OF CASCARILLA.

Take of Cascarilla, bruised, two ounces and a half ;
Proof Spirit, one pint.

Macerate the Cascarilla for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally ; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA CASTOREI.

TINCTURE OF CASTOR.

Take of Castor, one ounce ;

Rectified Spirit, one pint.

Macerate for seven days, strain, express, filter, and add sufficient Rectified Spirit to make one pint.

TINCTURA CATECHU.

TINCTURE OF CATECHU.

Take of Catechu, in coarse powder, two ounces and a half ;

Cinnamon, bruised, one ounce ;

Proof Spirit, one pint.

Macerate the Catechu and Cinnamon, for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally ; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA CHIRATÆ.

TINCTURE OF CHIRETTA.

Take of Chiretta, bruised, two ounces and a half;
Proof Spirit, one pint.

Macerate the Chiretta for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA CINCHONÆ COMPOSITA.

COMPOUND TINCTURE OF CINCHONA.

Take of Pale-Cinchona Bark, in coarse powder, two ounces;
Bitter-Orange Peel, cut small, and bruised, one ounce;
Serpentary, bruised, half an ounce;
Saffron, sixty grains;
Cochineal, in powder, thirty grains;
Proof Spirit, one pint.

Macerate the Cinchona Bark, and the other ingredients, for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA CINCHONÆ FLAVÆ.

TINCTURE OF YELLOW CINCHONA.

Take of Yellow-Cinchona Bark, in coarse powder,
four ounces;

Proof Spirit, one pint.

Macerate the Cinchona Bark for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA CINNAMOMI.

TINCTURE OF CINNAMON.

Take of Cinnamon, in coarse powder, two ounces and a half;

Proof Spirit, one pint.

Macerate the Cinnamon for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA COCCI.

TINCTURE OF COCHINEAL.

Take of Cochineal, in powder, two ounces and a half;

Proof Spirit, one pint.

Macerate for seven days, strain, express, filter, and add sufficient Proof Spirit to make one pint.

TINCTURA COLCHICI SEMINIS.

TINCTURE OF COLCHICUM SEED.

Take of Colchicum Seed, bruised, two ounces and a half;

Proof Spirit, one pint.

Macerate the Colchicum for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA CONII FRUCTUS.

TINCTURE OF HEMLOCK FRUIT.

Take of Hemlock Fruit, bruised, two ounces and a half;

Proof Spirit, one pint.

Macerate the Hemlock Fruit for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator

the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA CROCI.

TINCTURE OF SAFFRON.

Take of Saffron, one ounce ;
Proof Spirit, one pint.

Macerate the Saffron for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally ; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA DIGITALIS.

TINCTURE OF DIGITALIS.

Take of Digitalis, bruised, two ounces and a half ;
Proof Spirit, one pint.

Macerate the Digitalis for forty-eight hours, with

fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA ERGOTÆ.

TINCTURE OF ERGOT.

Take of Ergot, bruised, five ounces;
Proof Spirit, one pint.

Macerate the Ergot for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA FERRI PERCHLORIDI.

TINCTURE OF PERCHLORIDE OF IRON.

Take of Solution of Perchloride of Iron, five fluid ounces ;

Rectified Spirit, fifteen fluid ounces.

Mix, and preserve in a stoppered bottle.

Test.—Specific gravity 0.992.

This tincture has one fourth of the strength of Tinctura Ferri Sesquichloridi, *Dub.*

TINCTURA GALLÆ.

TINCTURE OF GALLS.

Take of Galls, bruised, two ounces and a half ;

Proof Spirit, one pint.

Macerate the Galls for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally ; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA GENTIANÆ COMPOSITA.

COMPOUND TINCTURE OF GENTIAN.

Take of Gentian, bruised, one ounce and a half;
Bitter-Orange Peel, cut small and bruised,
three quarters of an ounce;
Cardamoms, bruised, a quarter of an ounce;
Proof Spirit, one pint.

Macerate the Gentian and the other ingredients for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA GUAIACI AMMONIATA.

AMMONIATED TINCTURE OF GUAIAIC.

Take of Guaiac Resin, in fine powder, four ounces;
Aromatic Spirit of Ammonia, one pint.

Macerate for seven days in a well-closed vessel and filter, then add sufficient Aromatic Spirit of Ammonia to make one pint.

TINCTURA HYOSCYAMI.

TINCTURE OF HYOSCYAMUS.

Take of Hyoscyamus Leaves, dried and bruised, two
ounces and a half;
Proof Spirit, one pint.

Macerate the Hyoscyamus for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA IODI.

TINCTURE OF IODINE.

Take of Iodine, half an ounce;
Iodide of Potassium, a quarter of an ounce;
Rectified Spirit, one pint.

Dissolve the Iodine and the Iodide of Potassium in the Spirit.

TINCTURA JALAPÆ.

TINCTURE OF JALAP.

Take of Jalap, in coarse powder, two ounces and a half;

Proof Spirit, one pint.

Macerate the Jalap for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA KINO.

TINCTURE OF KINO.

Take of Kino, in moderately fine powder, two ounces;

Rectified Spirit, one pint.

Macerate for seven days, filter, and add sufficient Rectified Spirit to make one pint.

TINCTURA KRAMERLÆ.

TINCTURE OF RHATANY.

Take of Rhatany, bruised, two ounces and a half ;
Proof Spirit, one pint.

Macerate the Rhatany for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally ; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA LAVANDULÆ COMPOSITA.

COMPOUND TINCTURE OF LAVENDER.

Take of English Oil of Lavender, one fluid drachm
and a half ;
English Oil of Rosemary, ten minims ;
Cinnamon, bruised, one hundred and fifty
grains ;
Nutmeg, bruised, one hundred and fifty
grains ;

Red Sandal-wood, three hundred grains ;
Rectified Spirit, two pints.

Macerate the Cinnamon, Nutmeg, and Red Sandal-wood in the Spirit for seven days ; then press out and strain ; dissolve the Oils in the strained tincture, and add sufficient Rectified Spirit to make two pints.

TINCTURA LIMONIS.

TINCTURE OF LEMON PEEL.

Take of Fresh Lemon Peel, sliced thin, two ounces
and a half ;
Proof Spirit, one pint.

Macerate the Lemon Peel for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally ; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA LOBELIÆ.

TINCTURE OF LOBELIA.

Take of Lobelia, dried and bruised, two ounces and a half;

Proof Spirit, one pint.

Macerate the Lobelia for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA LOBELIÆ ÆTHEREA.

ETHEREAL TINCTURE OF LOBELIA.

Take of Lobelia, dried and bruised, two ounces and a half;

Spirit of Ether, one pint.

Macerate for seven days, then press and strain, and add sufficient Spirit of Ether to make one pint.

TINCTURA LUPULI.

TINCTURE OF HOP.

Take of Hop, two ounces and a half;

Proof Spirit, one pint.

Macerate the Hop for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA MYRRHÆ.

TINCTURE OF MYRRH.

Take of Myrrh, in coarse powder, two ounces and a half;

Rectified Spirit, one pint.

Macerate the Myrrh for forty-eight hours with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the

percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Rectified Spirit to make one pint.

TINCTURA NUCIS VOMICÆ.

TINCTURE OF NUX VOMICA.

Take of Nux Vomica, two ounces ;
Rectified Spirit, one pint.

Apply steam to the Nux Vomica until it is thoroughly softened, then dry rapidly, and reduce it to fine powder. Macerate the powder for forty-eight hours with fifteen ounces of the Spirit, in a close vessel, agitating occasionally ; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Rectified Spirit to make one pint.

TINCTURA OPII.

TINCTURE OF OPIUM.

Take of Opium, in coarse powder, one ounce and
a half ;
Proof Spirit, one pint.

Macerate the Opium for seven days, strain, express and filter ; then add sufficient Proof Spirit to make one pint.

TINCTURA QUININÆ COMPOSITA.

COMPOUND TINCTURE OF QUINIA.

Take of Sulphate of Quinia, one hundred and sixty grains ;

Tincture of Orange Peel, one pint.

Digest for seven days, and strain.

TINCTURA RHEI.

TINCTURE OF RHUBARB.

Take of Rhubarb, bruised, two ounces ;

Cardamoms, bruised, a quarter of an ounce ;

Coriander, bruised, a quarter of an ounce ;

Saffron, a quarter of an ounce ;

Proof Spirit, one pint.

Macerate the Rhubarb, Cardamoms, Coriander, and Saffron for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally ; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed,

subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA SABINÆ.

TINCTURE OF SAVIN.

Take of Savin, dried and bruised, two ounces and a half;

Proof Spirit, one pint.

Macerate the Savin for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA SCILLÆ.

TINCTURE OF SQUILL.

Take of Squill, bruised, two ounces and a half;

Proof Spirit, one pint.

Macerate the Squill for forty-eight hours, with fifteen

ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA SENEGÆ.

TINCTURE OF SENEGA.

Take of Senega, bruised, two ounces and a half;
Proof Spirit, one pint.

Macerate the Senega for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA SENNÆ.

TINCTURE OF SENNA.

Take of Senna, broken small, two ounces and a half;
Raisins, freed from seeds, two ounces;
Caraway, half an ounce;
Coriander, half an ounce;
Proof Spirit, one pint.

Macerate the Senna and the other ingredients for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA SERPENTARIÆ.

TINCTURE OF SERPENTARY.

Take of Serpentry, bruised, two ounces and a half;
Proof Spirit, one pint.

Macerate the Serpentry for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating

occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA STRAMONII.

TINCTURE OF STRAMONIUM.

Take of Stramonium Seeds, bruised, two ounces
and a half;

Proof Spirit, one pint.

Macerate the Stramonium for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA TOLUTANA.

TINCTURE OF TOLU.

Take of Balsam of Tolu, two ounces and a half;
Rectified Spirit, one pint.

Macerate for six hours, or until the Balsam is dissolved, then filter, and add sufficient Rectified Spirit to make one pint.

TINCTURA VALERIANÆ.

TINCTURE OF VALERIAN.

Take of Valerian, bruised, two ounces and a half;
Proof Spirit, one pint.

Macerate the Valerian for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Proof Spirit to make one pint.

TINCTURA VALERIANÆ AMMONIATA.

AMMONIATED TINCTURE OF VALERIAN.

Take of Valerian, bruised, two ounces and a half;
Aromatic Spirit of Ammonia, one pint.

Macerate the Valerian for seven days in a well-closed vessel, then filter, and add sufficient Aromatic Spirit of Ammonia to make one pint.

TINCTURA ZINGIBERIS.

TINCTURE OF GINGER.

Take of Ginger, bruised, two ounces and a half;
Rectified Spirit, one pint.

Macerate the Ginger for forty-eight hours, with fifteen ounces of the Spirit, in a close vessel, agitating occasionally; then transfer to a percolator, and when the fluid ceases to pass, pour into the percolator the remaining five ounces of the Spirit. As soon as the percolation is completed, subject the contents of the percolator to pressure, filter the product, mix the two liquids, and add sufficient Rectified Spirit to make one pint.

TROCHISCI ACIDI TANNICI.

TANNIN LOZENGES.

Take of Tannic Acid, three hundred and sixty grains ;

Tincture of Tolu, half a fluid ounce ;

Refined Sugar, in powder, twenty-five ounces ;

Gum Arabic, in powder, one ounce ;

Mucilage of Gum Arabic, two fluid ounces ;

Boiling Distilled Water, one fluid ounce.

Dissolve the Tannic Acid in the Water ; add this solution to the Tincture of Tolu, previously mixed with the Mucilage ; and with the Gum and the Sugar, also previously well mixed, form a proper mass. Divide into 720 lozenges, and dry these in a hot-air chamber with a moderate heat.

Each lozenge contains half a grain of Tannic Acid.

TROCHISCI BISMUTHI.

BISMUTH LOZENGES.

Take of White Bismuth, fourteen hundred and forty grains ;

Carbonate of Magnesia, four ounces ;

Precipitated Carbonate of Lime, six ounces ;

Refined Sugar, thirty ounces ;
Gum Arabic, in powder, one ounce ;
Distilled Water, six fluid ounces ;
Oil of Cinnamon, half a fluid drachm.

Add the dry ingredients to the Water; mix thoroughly, and boil till the mixture is reduced to a proper consistence. Then remove it from the fire, add the Oil of Cinnamon, and again mix thoroughly. Divide the mass into 720 square lozenges, and dry these in a hot-air chamber with a moderate heat.

Each lozenge contains two grains of White Bismuth.

TROCHISCI CATECHU.

CATECHU LOZENGES.

Take of Pale Catechu, in powder, two ounces ;
Refined Sugar, in powder, one pound ;
Gum Arabic, in powder, one ounce ;
Tincture of Capsicum, half a fluid ounce ;
Distilled Water, a sufficiency.

Add to the Catechu Sugar and Gum Arabic, previously mixed, the Tincture of Capsicum, and sufficient Distilled Water to make a proper mass. Mix thoroughly, divide the mass into 720 lozenges, and dry these in a hot-air chamber with a moderate heat.

TROCHISCI MORPHLÆ.

MORPHIA LOZENGES.

Take of Hydrochlorate of Morphia, twenty grains ;
Tincture of Tolu, half a fluid ounce ;
Refined Sugar, in powder, twenty-four
ounces ;
Gum Arabic, in powder, one ounce ;
Mucilage of Gum Arabic, two fluid ounces,
or a sufficiency ;
Boiling Distilled Water, half a fluid ounce.

Dissolve the Hydrochlorate of Morphia in the Water ; add this solution to the Tincture of Tolu, previously mixed with the Mucilage ; and, with the Gum and the Sugar, also previously well mixed, form a proper mass. Divide into 720 lozenges, and dry these in a hot-air chamber with a moderate heat.

Each lozenge contains one thirty-sixth of a grain of Hydrochlorate of Morphia.

TROCHISCI MORPHLÆ ET IPECACUANHÆ.

MORPHIA AND IPECACUAN LOZENGES.

Take of Hydrochlorate of Morphia, twenty grains ;
Ipecacuan, in fine powder, sixty grains ;
Tincture of Tolu, half a fluid ounce ;

Refined Sugar, in powder, twenty-four ounces ;

Gum Arabic, in powder, one ounce ;

Mucilage of Gum Arabic, two fluid ounces,
or a sufficiency ;

Boiling Distilled Water, half a fluid ounce.

Dissolve the Hydrochlorate of Morphia in the Water ; add this solution to the Tincture of Tolu, previously mixed with the Mucilage ; and, with the Ipecacuan the Gum and the Sugar, also previously well mixed, form a proper mass. Divide into 720 lozenges, and dry these in a hot-air chamber with a moderate heat.

Each lozenge contains one thirty-sixth of a grain of Hydrochlorate of Morphia, and one twelfth of a grain of Ipecacuan.

TROCHISCI OPII.

OPIUM LOZENGES.

Take of Extract of Opium, seventy-two grains ;

Tincture of Tolu, half a fluid ounce ;

Refined Sugar, in powder, sixteen ounces ;

Gum Arabic, in powder, two ounces ;

Extract of Liquorice, six ounces ;

Boiling Distilled Water, a sufficiency.

Add the Extract of Opium, first softened by means of a little Water, and the Tincture of Tolu, to the

Extract of Liquorice heated in a water bath. When the mixture is reduced to a proper consistence remove it to a slab, add the Sugar and Gum, previously rubbed together, and mix thoroughly. Divide the mass into 720 lozenges, and dry these in a hot-air chamber with a moderate heat.

Each lozenge contains one tenth of a grain of Extract of Opium.

UNGUENTUM ACONITLÆ.

OINTMENT OF ACONITIA.

Take of Aconitia, eight grains ;
Rectified Spirit, half a fluid drachm ;
Prepared Lard, one ounce.

Dissolve the Aconitia in the Spirit, add the Lard, and mix thoroughly.

UNGUENTUM ANTIMONII TARTARATI.

OINTMENT OF TARTARATED ANTIMONY.

Take of Tartarated Antimony, in fine powder, a
quarter of an ounce ;
Simple Ointment, one ounce.

Mix thoroughly.

This Ointment contains nearly twice as much Tartarated Antimony as Unguentum Antimonii Tartarizati, *Dub.*

UNGUENTUM ATROPIÆ.

OINTMENT OF ATROPIA.

Take of Atropia, eight grains ;
Rectified Spirit, half a fluid drachm ;
Prepared Lard, one ounce.

Dissolve the Atropia in the Spirit, add the Lard, and mix thoroughly.

UNGUENTUM BELLADONNÆ.

OINTMENT OF BELLADONNA.

Take of Extract of Belladonna, eighty grains ;
Prepared Lard, one ounce.

Rub the Extract smooth with a few drops of distilled water, then add the Lard, and mix thoroughly.

UNGUENTUM CALOMELANOS.

OINTMENT OF CALOMEL.

Take of Calomel, eighty grains ;
Prepared Lard, one ounce.

Mix thoroughly.

UNGUENTUM CANTHARIDIS.

OINTMENT OF CANTHARIDES.

Take of Cantharides, one ounce ;
Yellow Wax, one ounce ;
Olive Oil, six fluid ounces.

Digest the Cantharides in the Oil, in a covered vessel for twelve hours, then place the vessel in a water bath at 212° for fifteen minutes, strain through muslin with strong pressure, add the product to the Wax previously melted, and stir constantly until the mixture solidifies.

UNGUENTUM CETACEI.

OINTMENT OF SPERMACETI.

Take of Spermaceti, five ounces ;
White Wax, two ounces ;
Almond Oil, one pint, or a sufficiency.

Melt together with a gentle heat, remove the mixture, and stir constantly until it solidifies.

UNGUENTUM COCCULI.

OINTMENT OF COCCULUS.

Take of The Seeds of *Cocculus Indicus*, eighty grains ;

Prepared Lard, one ounce.

Beat the Seeds well in a mortar, and rub them with the Prepared Lard.

UNGUENTUM CREASOTI.

OINTMENT OF CREASOTE.

Take of Creasote, one fluid drachm ;

Simple Ointment, one ounce.

Mix thoroughly.

UNGUENTUM ELEMI.

OINTMENT OF ELEMI.

Take of Elemi, a quarter of an ounce ;

Simple Ointment, one ounce.

Melt, strain through flannel, and stir constantly until the ointment solidifies.

UNGUENTUM GALLÆ.

OINTMENT OF GALLS.

Take of Galls, in very fine powder, eighty grains ;
Simple Ointment, one ounce.

Mix thoroughly.

UNGUENTUM GALLÆ CUM OPIO.

OINTMENT OF GALLS AND OPIUM.

Take of Ointment of Galls, one ounce ;
Opium, in powder, thirty-two grains.

Mix thoroughly.

UNGUENTUM HYDRARGYRI.

OINTMENT OF MERCURY.

Take of Mercury, one pound ;
Prepared Lard, one pound ;
Prepared Suet, one ounce.

Rub them together until metallic globules cease to be visible.

UNGUENTUM HYDRARGYRI AMMONIATI.

OINTMENT OF AMMONIATED MERCURY.

Synonym.—UNGUENTUM PRÆCIPITATI ALBI, *Ed.*

Take of Ammoniated Mercury, sixty-four grains ;
Simple Ointment, one ounce.

Mix thoroughly.

UNGUENTUM HYDRARGYRI IODIDI RUBRI.

OINTMENT OF RED IODIDE OF MERCURY.

Take of Red Iodide of Mercury, in very fine powder
sixteen grains ;
Simple Ointment, one ounce.

Mix thoroughly.

This Ointment contains one fourth as much Red Iodide of Mercury as Unguentum Hydrargyri Iodidi rubri, *Dub.*

UNGUENTUM HYDRARGYRI NITRATIS.

OINTMENT OF NITRATE OF MERCURY.

Synonym.—UNGUENTUM CITRINUM, *Ed.*

Take of Mercury, by weight, four ounces ;
Nitric Acid, eight fluid ounces ;
Prepared Lard, fifteen ounces ;
Olive Oil, thirty-two fluid ounces.

Dissolve the Mercury in the Nitric Acid with the aid of a gentle heat; melt the Lard in the Oil, by a steam or water bath, in a porcelain vessel capable of holding six times the quantity; and, while the mixture is hot, add the Solution of Mercury, also hot, mixing them thoroughly. If the mixture do not froth up, increase the heat till this occurs.

UNGUENTUM HYDRARGYRI OXIDI RUBRI.

OINTMENT OF RED OXIDE OF MERCURY.

Synonym.—UNGUENTUM HYDRARGYRI NITRICO-OXIDI, *Lond.*

Take of Red Oxide of Mercury, in very fine powder,
sixty-four grains;
Simple Ointment, one ounce.

Mix thoroughly.

UNGUENTUM IODI COMPOSITUM.

COMPOUND OINTMENT OF IODINE.

Take of Iodine, thirty-two grains;
Iodide of Potassium, thirty-two grains;
Proof Spirit, one fluid drachm;
Prepared Lard, two ounces.

Rub the Iodine and the Iodide of Potassium well together, with the Spirit, in a glass or porcelain mortar, add the Lard gradually, and mix thoroughly.

UNGUENTUM PLUMBI CARBONATIS.

OINTMENT OF CARBONATE OF LEAD.

Take of Carbonate of Lead, in fine powder, sixty-four grains ;

Simple Ointment, one ounce.

Mix thoroughly.

UNGUENTUM PLUMBI SUBACETATIS.

OINTMENT OF SUBACETATE OF LEAD.

Take of Solution of Subacetate of Lead, six fluid ounces ;

Camphor, sixty grains ;

White Wax, eight ounces ;

Olive Oil, one pint.

Melt the Wax with sixteen ounces of the Oil on a steam or water bath, remove the vessel, and, as soon as the mixture begins to thicken, gradually add the Solution of Subacetate of Lead, and stir the mixture constantly until it cools ; then add the Camphor dissolved in the rest of the Oil, and mix thoroughly.

UNGUENTUM POTASSII IODIDI.

OINTMENT OF IODIDE OF POTASSIUM.

Take of Iodide of Potassium, sixty-four grains ;
Distilled Water, one fluid drachm ;
Prepared Lard, one ounce.

Dissolve the Iodide of Potassium in the Water, and mix thoroughly with the Lard.

UNGUENTUM RESINÆ.

OINTMENT OF RESIN.

Take of Resin, in coarse powder, eight ounces ;
Yellow Wax, four ounces ;
Simple Ointment, sixteen ounces.

Melt with a gentle heat, strain the mixture while hot, through flannel, and stir constantly until it cools.

UNGUENTUM SABINÆ

OINTMENT OF SAVIN.

Take of Fresh Savin, bruised, eight ounces ;
White Wax, three ounces ;
Prepared Lard, sixteen ounces.

Melt the Lard and the Wax together on a water bath, add the Savin, and digest for twenty minutes. Then remove the mixture, and express through calico.

UNGUENTUM SIMPLEX.

SIMPLE OINTMENT.

Take of White Wax, two ounces ;
Prepared Lard, three ounces ;
Almond Oil, three fluid ounces.

Melt the Wax and Lard in the Oil on a water bath ; then remove the mixture, and stir until it becomes solid.

UNGUENTUM SULPHURIS.

OINTMENT OF SULPHUR.

Take of Sublimed Sulphur, one ounce ;
Prepared Lard, four ounces.
Mix thoroughly.

UNGUENTUM TEREBINTHINÆ.

OINTMENT OF TURPENTINE.

Take of Oil of Turpentine, one fluid ounce ;
Resin, in coarse powder, sixty grains ;

Yellow Wax, half an ounce ;
Prepared Lard, half an ounce.

Mix the ingredients together by the heat of a steam or water bath. When they are melted, remove the vessel, and stir until the mixture becomes solid.

UNGUENTUM VERATRILÆ.

OINTMENT OF VERATRIA.

Take of Veratria, eight grains ;
Prepared Lard, one ounce ;
Olive Oil, half a fluid drachm.

Rub the Veratria and the Oil together ; then mix them thoroughly with the Lard.

UNGUENTUM ZINCI OXIDI.

OINTMENT OF OXIDE OF ZINC.

Take of Oxide of Zinc, in very fine powder, eighty grains ;
Simple Ointment, one ounce.

Add the Oxide of Zinc to the Ointment, previously melted with a gentle heat, and stir the mixture constantly until it becomes solid.

VERATRIA.

VERATRIA.

Take of Cevadilla, two pounds ;
Distilled Water, a sufficiency ;
Rectified Spirit, a sufficiency ;
Solution of Ammonia, a sufficiency ;
Hydrochloric Acid, a sufficiency ;
Purified Animal Charcoal, sixty grains.

Macerate the Cevadilla with half its weight of boiling Distilled Water in a covered vessel for twenty-four hours. Remove the Cevadilla, squeeze it, and dry it thoroughly with a gentle heat. Beat it now in a mortar, and separate the seeds from the capsules by brisk agitation in a deep narrow vessel, or by winnowing it gently on a table with a sheet of paper. Grind the seeds in a coffee-mill, and form them into a thick paste with Rectified Spirit. Pack this firmly in a percolator, and pass Rectified Spirit through it till the spirit ceases to be coloured. Concentrate the spirituous solution by distillation, so long as no deposit forms, and pour the residue, while hot, into twelve times its volume of cold Distilled Water. Filter through calico, and wash the residue on the filter with Distilled Water, till the fluid ceases to precipitate with ammonia. To the united filtered liquids add the Ammonia in slight excess, let the pre-

precipitate completely subside, pour off the supernatant fluid, collect the precipitate on a filter, and wash it with Distilled Water till the fluid passes colourless. Diffuse the moist precipitate through twelve fluid ounces of Distilled Water, and add gradually with diligent stirring sufficient Hydrochloric Acid to make the fluid feebly but persistently acid. Then add the Animal Charcoal, digest at a gentle heat for twenty minutes, filter, and allow the liquid to cool. Add Ammonia in slight excess, and, when the precipitate has completely subsided, pour off the supernatant liquid, collect the precipitate on a filter, and wash it with cold Distilled Water till the washings cease to be affected by nitrate of silver acidulated with nitric acid. Lastly dry the precipitate first by imbibition, with filtering paper, and then on the steam bath.

VINUM ALOES.

WINE OF ALOES.

Take of Socotrine Aloes, one ounce and a half;
Cardamoms, ground, eighty grains;
Ginger, in coarse powder, eighty grains;
Sherry, two pints.

Digest for seven days, and strain through calico

VINUM ANTIMONIALE.

ANTIMONIAL WINE.

Take of Tartarated Antimony, forty grains ;
Sherry, one pint.

Dissolve.

VINUM COLCHICI.

WINE OF COLCHICUM.

Take of Colchicum Corm, dried and sliced, four
ounces ;
Sherry, one pint.

Macerate the Colchicum in the Wine for seven days, press and strain through calico ; pour on the marc sufficient Sherry to make up one pint, and having pressed and strained as before, mix the fluids.

VINUM FERRI.

WINE OF IRON.

Take of Tartarated Iron, one hundred and sixty
grains ;
Sherry, one pint.

Dissolve.

VINUM IPECACUANHÆ.

WINE OF IPECACUAN.

Take of Ipecacuan, bruised, one ounce ;
Sherry, one pint.

Macerate for seven days, with occasional agitation,
strain, express and filter.

VINUM OPII.

WINE OF OPIUM.

Take of Opium, in powder, one ounce and a half ;
Sherry, one pint.

Macerate for seven days, strain, express, and filter ;
then add sufficient Sherry to make one pint.

ZINCI ACETAS.

ACETATE OF ZINC.

Take of Carbonate of Zinc, two ounces ;
Acetic Acid, five fluid ounces, or a suffi-
ciency ;
Distilled Water, six fluid ounces.

Add the Carbonate of Zinc in successive portions to
three ounces of the Acetic Acid previously mixed with
the Water in a flask ; heat gently ; add by degrees the

remainder of the Acid till the carbonate is dissolved ; boil for a few minutes, filter while hot, and set it aside for two days to crystallize. Decant the mother liquor ; evaporate to one half, and again set it aside for two days to crystallize. Place the united crystals in a funnel to drain, then spread them on filtering paper on a porous brick, and dry them by exposure to the air at ordinary temperatures.

ZINCI CARBONAS.

CARBONATE OF ZINC.

Take of Sulphate of Zinc, ten ounces ;
Carbonate of Soda, ten ounces and a half ;
Boiling Distilled Water, a sufficiency.

Dissolve the Carbonate of Soda with a pint of the Water in a capacious porcelain vessel, and pour into it the Sulphate of Zinc also dissolved in a pint of the Water, stirring diligently. Boil for fifteen minutes after effervescence has ceased ; and let the precipitate subside. Decant the supernatant liquor, pour on the precipitate three pints of boiling Distilled Water, agitating briskly ; let the precipitate again subside, and repeat the processes of affusion of hot Distilled Water and subsidence, till the washings are no longer precipitated by chloride of barium. Collect the precipitate on calico, let it drain, and dry it with a gentle heat.

ZINCI CHLORIDUM.

CHLORIDE OF ZINC.

Take of Granulated Zinc, sixteen ounces ;

Hydrochloric Acid, forty-four fluid ounces ;

Solution of Chlorine, a sufficiency ;

Carbonate of Zinc, half an ounce, or a sufficiency ;

Distilled Water, one pint.

Put the Zinc into a porcelain basin, add by degrees the Hydrochloric Acid previously mixed with the Water, and aid the action by gently warming it on a sand bath until gas is no longer evolved. Boil for half an hour, supplying the water lost by evaporation, and allow it to stand on a cool part of a sand bath for twenty-four hours, stirring frequently. Filter the product into a gallon bottle, and pour in the Solution of Chlorine by degrees, with frequent agitation, until the fluid acquires a permanent odour of chlorine. Add the Carbonate of Zinc, in small quantities at a time, and with renewed agitation, until a brown sediment appears. Filter through paper into a porcelain basin, and evaporate until a portion of the liquid, withdrawn on the end of a glass rod and cooled, forms an opaque white solid. Pour it out now into proper moulds, and when the salt has solidified, but before it has cooled, place it in closely stoppered bottles.

ZINCI OXIDUM.

OXIDE OF ZINC.

Take of Carbonate of Zinc, six ounces.

Place the Carbonate of Zinc in a loosely covered Hessian crucible, and expose it to a dull red heat, until a portion, taken from the centre of the contents of the crucible and cooled, no longer effervesces when dropped into dilute sulphuric acid. Let the crucible cool, and transfer the product to stoppered bottles.

ZINCI SULPHAS.

SULPHATE OF ZINC.

Take of Granulated Zinc, sixteen ounces ;

Sulphuric Acid, twelve fluid ounces ;

Distilled Water, four pints ;

Solution of Chlorine, a sufficiency ;

Carbonate of Zinc, half an ounce, or a sufficiency.

Pour the Sulphuric Acid previously mixed with the Water on the Zinc contained in a porcelain basin, and, when effervescence has nearly ceased, aid the action by a gentle heat. Filter the fluid into a gallon bottle, and add gradually with constant agitation the Solution of Chlorine until the fluid acquires a permanent odour

of chlorine. Add now with continued agitation the Carbonate of Zinc until a brown precipitate appears; let it settle, filter the solution, evaporate till a pellicle forms on the surface, and set aside to crystallize. Dry the crystals by exposure to the air on filtering paper placed on porous bricks. More crystals may be obtained by again evaporating the mother liquor.

ZINCI VALERIANAS.

VALERIANATE OF ZINC.

Take of Sulphate of Zinc, five ounces and three quarters;

Valerianate of Soda, five ounces;

Distilled Water, a sufficiency.

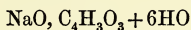
Dissolve the Sulphate of Zinc and the Valerianate of Soda, each in two pints of the Water; raise both solutions to near the boiling point, mix them, cool, and skim off the crystals which are produced. Evaporate the mother liquor at a heat not exceeding 200° , till it is reduced to four ounces; cool again, remove the crystals which have formed, and add them to those which have been already obtained. Drain the crystals on a paper filter, and wash them with a small quantity of cold Distilled Water, till the washings give but a very feeble precipitate with chloride of barium. Let them now be again drained, and dried on filtering paper at ordinary temperatures.

APPENDIX.

APPENDIX A.

ARTICLES EMPLOYED IN THE PREPARATION OF MEDICINES.

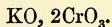
ACETATE OF SODA.



Tests.—Its solution in water, when dilute, is not precipitated by chloride of barium or nitrate of silver.

ARSENIOUS ACID OF COMMERCE. White Arsenic.

BICHROMATE OF POTASH.



Tests.—The solution in water gives with chloride of barium a yellowish-white, and with nitrate of silver an orange, precipitate; both of which are entirely soluble in dilute nitric acid.

BISMUTH.

BLACK OXIDE OF MANGANESE.

Binoxide of Manganese.



Tests. — Gives off oxygen when heated to redness, and is almost entirely soluble in hydrochloric acid with the evolution of chlorine.

BONE ASH.

The Residue of Ox and Sheep Bones, which have been burned white in contact with air, reduced to powder; consisting principally of Phosphate of Lime and a little Carbonate of Lime.

BONE BLACK. Animal Charcoal, Ivory Black.

The Residue of Ox and Sheep Bones, which have been exposed to a red heat without the access of air, reduced to powder.

BREAD.

Bread made with wheat flour.

BROMINE.

It should be preserved under a layer of water in a stoppered bottle.

Tests.—Specific gravity 2.966. Agitated with solution of soda in

such proportion that the fluid remains very slightly alkaline, it forms a colourless liquid, which, if coloured by the addition of a small quantity of chlorine, does not become blue on the subsequent addition of starch.

CHALK.

Soft white amorphous native Carbonate of Lime.

CHLORIDE OF CALCIUM.

Chloride of Calcium dried at a dull red heat, CaCl .

It should be kept in a well-closed bottle.

Tests.—Dry, but very deliquescent, and entirely soluble in twice its weight of water. The solution is not precipitated by lime.

COTTON. Cotton Wool.

The Hairs of the seed of various species of *Gossypium Linn.* carded.

ETHER, PURE.

Ether free from Alcohol and Water, $\text{C}_4\text{H}_5\text{O}$.

Take of Ether, two pints;

Distilled Water, two pints;

Lime recently burned, a quarter of an ounce;

Chloride of Calcium perfectly dry, four ounces.

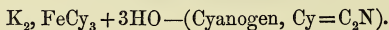
Shake the Ether with one pint of the Water, and after separation has taken place, decant the ether, and again shake

it with the remainder of the Water. Decant again, and put the washed ether into a retort with the Lime and the Chloride of Calcium, and after digestion for twenty-four hours, distil with the aid of a gentle heat.

Test.—Specific gravity not exceeding 0·720.

FERROCYANIDE OF POTASSIUM.

Yellow Prussiate of Potash.



FLOUR. Wheat Flour.

The grain of Wheat, *Triticum vulgare Villars*, ground and sifted.

FOUSEL OIL. Amylic Alcohol.

Hydrate of Oxide of Amyl, $\text{C}_{10}\text{H}_{11}\text{O}$, HO.

Tests.—Specific gravity 0·818; boiling point 270°.

HOG'S FAT.

The internal Fat of the abdomen of the Hog, *Sus Scrofa Linn.*

HYDROCHLORIC ACID OF COMMERCE.

Muriatic Acid.

IODINE OF COMMERCE.

IRON WIRE. Annealed Iron Wire, Binding Wire.

MARBLE.

Hard white crystalline native Carbonate of Lime, in masses.

MERCURY OF COMMERCE. Quicksilver.

MILK. Cow's Milk.

NITRATE OF POTASH OF COMMERCE.

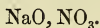
Nitre, Saltpetre.

NITRATE OF SODA.

 $\text{NaO}, \text{NO}_5.$

Tests.—Entirely soluble in distilled water, the solution giving no precipitate with nitrate of silver or chloride of barium.

NITRITE OF SODA.



Take of Nitrate of Soda, one pound;

Charcoal recently burned, and in fine powder, one ounce and a quarter.

Mix the Nitrate of Soda and the Charcoal thoroughly in a mortar, and drop the mixture in successive portions into a clay crucible heated to dull redness. When the salt has become quite white, raise the heat so as to liquefy it, pour it out on a clean flagstone, and, when it has solidified, break it into fragments, and keep it in a stoppered bottle.

Characters.—In opaque white fragments, soluble in water and in rectified spirit. The aqueous solution gives a white crystalline precipitate with nitrate of silver, which dissolves in hot water. A fragment, moistened with a solution of sulphate of copper, acquires an emerald-green colour. Tartaric acid, added to a strong solution, develops ruddy fumes, but gives no precipitate.

OX BILE. Ox Gall.

The fresh Bile of the Ox, *Bos Taurus Linn.*

PHOSPHORUS.

It should be kept under water in well closed bottles.

Test.—Entirely soluble in boiling oil of turpentine.

PYROXYLIN. Gun Cotton.

Take of Cotton, one ounce;

Sulphuric Acid, five fluid ounces;

Nitric Acid, five fluid ounces.

Mix the Acids in a porcelain mortar, immerse the Cotton in the mixture, and stir it for three minutes with a glass rod, until it is thoroughly wetted by the acids. Transfer the cotton to a vessel containing water, stir it well with a glass rod, decant the liquid, pour more water upon the mass, agitate again, and repeat the affusion, agitation, and decantation, until the washing ceases to give a precipitate with chloride of barium. Drain the product on filtering paper, and dry in a water bath.

Tests.—Readily soluble in a mixture of ether and rectified spirit; leaves no residue when exploded by heat.

RESIDUE OF NITRIC ACID PROCESS.

Bisulphate of Potash, $\text{KO}, \text{HO}, 2\text{SO}_3$, not quite pure.

SILVER, REFINED.

Pure metallic Silver.

Tests.—If ammonia is added in excess to the solution of the metal in nitric acid, the resulting fluid exhibits neither colour nor turbidity.

SOLUTION OF PERSULPHATE OF IRON.

Persulphate of Iron, $\text{Fe}_2\text{O}_3, 3\text{SO}_3$, in solution in Water.

Take of Sulphate of Iron, eight ounces ;

Sulphuric Acid, six fluid drachms ;

Nitric Acid four fluid drachms ;

Distilled Water, twelve fluid ounces, or a sufficiency.

Add the Sulphuric Acid to ten ounces of the Water, and dissolve the Sulphate of Iron in the mixture, with the aid of heat. Mix the Nitric Acid with the remaining two ounces of Water, and add the dilute acid to the solution of sulphate of iron. Concentrate the whole by boiling, until, upon the sudden disengagement of ruddy vapours, the liquid ceases to be black and acquires a red colour. A drop of the solution is now to be tested with ferridcyanide of potassium, and if a blue precipitate forms, a few additional drops of Nitric Acid should be added, and the boiling renewed, in order that the whole of the protosulphate may be converted into persulphate of iron. When the solution is cold, make the quantity eleven fluid ounces, by the addition, if necessary, of Distilled Water.

Characters.—A viscid solution of a dark-red colour, inodorous, and very astringent, miscible in all proportions with alcohol and water. Diluted with ten volumes of water it gives a white precipitate with the chloride of barium, and a blue precipitate with the ferrocyanide, but not with the ferridcyanide of potassium.

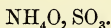
Tests.—Specific gravity 1.441. One fluid drachm diluted with two fluid ounces of distilled water gives upon the addition of an

excess of solution of ammonia a precipitate, which, when well washed and incinerated, weighs 11.44 grains.

SQUIRTING CUCUMBER FRUIT.

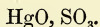
The nearly ripe Fruit of *Ecbalium Officinatum* *Richard*.

SULPHATE OF AMMONIA.



SULPHATE OF COPPER OF COMMERCE.

SULPHATE OF MERCURY.



Take of Mercury, by weight, twenty ounces ;

Sulphuric Acid, twelve fluid ounces.

Heat the Mercury with the Sulphuric Acid in a porcelain vessel, with constant stirring, until the metal disappears, then continue the heat until a dry white salt remains.

Characters.—A white crystalline heavy powder, rendered yellow by affusion of water.

Test.—Entirely volatilized by heat.

SULPHURET OF ANTIMONY, PREPARED.

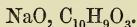
Tersulphuret of Antimony, SbS_3 , reduced to fine powder.

Test.—Almost entirely soluble in boiling hydrochloric acid.

SULPHURIC ACID OF COMMERCE. Oil of Vitriol.

Tests.—Specific gravity 1·84 to 1·85. When the acid mixed with six times its volume of distilled water is placed in contact with pure zinc, and the hydrogen evolved is ignited as it escapes from the capillary extremity of a glass tube, if a dark stain is formed on a piece of porcelain held low down on the flame, the acid contains arsenic, and is to be rejected. When a solution of sulphate of iron is poured cautiously on the surface of the undiluted acid, if a red tint appears at the surface of contact, the acid contains nitrous acid, and if the acid diluted as above becomes turbid, it contains other impurities, and in either case requires purification.

VALERIANATE OF SODA.



Take of Solution of Soda, a sufficiency;
Fousel Oil, four fluid ounces;
Bichromate of Potash, nine ounces;
Sulphuric Acid, six fluid ounces and a half;
Distilled Water, half a gallon.

Dilute the Sulphuric Acid with ten fluid ounces of the Water, and dissolve the Bichromate of Potash in the remainder with the aid of heat. When both liquids are cold, mix them with the Fousel Oil in a matrass with occasional brisk agitation, until the temperature of the mixture has fallen to about 90°. Connect the matrass with a condenser, and distil until about half a gallon of liquid has passed over. Saturate the distilled liquid accurately with the Solution of Soda, remove any oil which floats on the surface, evaporate

till watery vapour ceases to escape, and then raise the heat cautiously so as to liquefy the salt. When the product has cooled and solidified, break it into pieces, and immediately put it into a stoppered bottle.

Characters.—In dry white masses without alkaline reaction, entirely soluble in rectified spirit, and giving out a powerful odour of Valerian on the addition of dilute sulphuric acid.

WHITE OF EGG.

The liquid Albumen of the Egg of Gallus Banckiva var. domesticus *Temminck*.

ZINC, GRANULATED.

Zinc granulated by fusing and pouring it into cold water.

Tests.—The hydrogen gas evolved when the metal dissolves in dilute pure sulphuric acid does not blacken a piece of paper moistened with a solution of acetate of lead; and when ignited gives no dark stain to the lid of a porcelain crucible held low down in the flame.

ZINC OF COMMERCE.

APPENDIX B.



I

ARTICLES EMPLOYED IN CHEMICAL ANALYSIS.



ALCOHOL. Absolute Alcohol.

Hydrate of Oxide of Ethyl, C_4H_5O , HO.

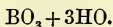
Take of Rectified Spirit, one pint;

Lime recently burned, eighteen ounces.

Having introduced the Lime and the Spirit into a matrass connected with a Liebig's condenser, apply heat until the Lime begins to slake; and when this process is completed, distil by means of a chloride of zinc bath, until the liquid which comes over, together with that obtained during the slaking, measures one ounce and a half. Reject this, and continue the distillation into a fresh receiver, until the product measures sixteen ounces.

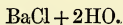
Tests.—Specific gravity 0.795. It is entirely volatilized by heat, is not rendered turbid when mixed with water, and does not give rise to a blue colour when in contact with anhydrous sulphate of copper.

BORACIC ACID.



Tests.—Soluble in alcohol. The solution burns with a green flame.

CHLORIDE OF BARIUM.

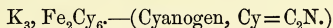


COPPER FOIL.

Pure Metallic Copper, thin and bright.

FERRIDCYANIDE OF POTASSIUM.

Red Prussiate of Potash.

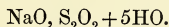


Test.—Its solution in water gives no precipitate with persulphate of iron.

GOLD, FINE.

Gold, free from metallic impurities.

HYPOSULPHITE OF SODA.



Test.—24·8 grains decolorize 100 measures of the volumetric solution of iodine.

INDIGO.



A Blue Pigment prepared from various species of *Indigofera Linn.*

ISINGLASS.

The Swimming Bladder or Sound of various species of *Acipenser Linn.*, prepared and cut into fine shreds.

LITMUS.

A Blue Pigment prepared from various species of *Roccella Acharius.*

LITMUS PAPER, BLUE.

Unsize Paper steeped in Tincture of Litmus, and dried by exposure to the air.

LITMUS PAPER, RED.

Unsize Paper steeped in Tincture of Litmus which has been previously reddened by the addition of a very minute quantity of Sulphuric Acid, and dried by exposure to the air.

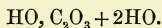
LITMUS TINCTURE.

Take of Litmus, in powder, one ounce;
Proof Spirit, ten fluid ounces.

Macerate for seven days, and filter.

OXALIC ACID OF COMMERCE.

OXALIC ACID, PURIFIED.



Take of Oxalic Acid of Commerce, one pound;
Boiling Distilled Water, thirty fluid ounces.

Dissolve, filter the solution, and set it aside to crystallize. Pour off the liquor, and dry the crystals by exposure to the air on filtering paper placed on porous bricks.

Test.—Is entirely dissipated by a heat below 350° .

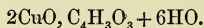
PLASTER OF PARIS.

Native Sulphate of Lime, CaO, SO_3 , deprived of water by heat.

PLATINUM FOIL.

POTASSIUM.

SUBACETATE OF COPPER OF COMMERCE. Verdigris.



SULPHATE OF COPPER, ANHYDROUS.



Sulphate of Copper deprived of its Water by a heat of 400° .

Characters.—A yellowish-white powder, which becomes blue when moistened with water.

SULPHURET OF IRON.



SULPHURETTED HYDROGEN.



Take of Sulphuret of Iron, half an ounce ;

Water, four fluid ounces ;

Sulphuric Acid of Commerce, a sufficiency.

Place the Sulphuret of Iron and the Water in a gas-bottle closed with a cork perforated by two holes, through one of which pass air-tight a funnel tube of sufficient length to dip into the water, and through the other a tube for giving exit to the gas. Through the former pour from time to time a little of the Acid, so as to develop the Sulphuretted Hydrogen according as it is wanted.

TIN, GRANULATED.

Grain Tin, granulated by fusing and pouring it into cold water.

TURMERIC.

The Rhizome of *Curcuma longa* *Linn.*

TURMERIC PAPER.

Unsize Paper steeped in Tincture of Turmeric and dried by exposure to the air.

TURMERIC TINCTURE.

Take of Turmeric, bruised, one ounce;

Proof Spirit, six fluid ounces.

Macerate for seven days, and strain.

II.TEST SOLUTIONS FOR QUALITATIVE ANALYSIS.

SOLUTION OF ACETATE OF COPPER.

(Acetate of Copper = CuO , $\text{C}_4\text{H}_3\text{O}_3 + \text{HO}$.)

Take of Subacetate of Copper of Commerce, in fine powder,
half an ounce;

Acetic Acid, one fluid ounce;
Distilled Water, a sufficiency.

Dilute the Acid with half a fluid ounce of the Water; digest the Subacetate of Copper in the mixture at a temperature not exceeding 212° with repeated stirring, and continue the heat until a dry residue is obtained. Digest this in four ounces of boiling Distilled Water, and by the addition of more of the Water make up the solution to five fluid ounces.

SOLUTION OF ACETATE OF POTASH.

Take of Acetate of Potash, half an ounce;
Distilled Water, five fluid ounces.

Dissolve.

SOLUTION OF ACETATE OF SODA.

Take of Acetate of Soda, half an ounce;
Distilled Water, five fluid ounces.

Dissolve.

SOLUTION OF ALBUMEN.

Take of One Egg the White;
Distilled Water, four fluid ounces.

Mix by trituration in a mortar, and filter through clean tow first moistened with distilled water.

This solution must be recently prepared.

SOLUTION OF AMMONIO-NITRATE OF SILVER.

(Ammonio-nitrate of Silver = $\text{AgO}, \text{NO}_5 + 2\text{NH}_3$.)

Take of Nitrate of Silver, in crystals, a quarter of an ounce ;

Solution of Ammonia, half a fluid ounce, or a sufficiency ;

Distilled Water, a sufficiency.

Dissolve the Nitrate of Silver in eight fluid ounces of the Water, and to the solution add the Ammonia until the precipitate first formed is nearly dissolved. Clear the solution by filtration, and then add Distilled Water, so that the bulk may be ten fluid ounces.

SOLUTION OF AMMONIO-SULPHATE OF COPPER.

(Ammonio-sulphate of Copper = $\text{CuO}, \text{SO}_3 + 2\text{NH}_3, \text{HO}$.)

Take of Sulphate of Copper, in crystals, half an ounce ;

Solution of Ammonia, a sufficiency ;

Distilled Water, a sufficiency.

Dissolve the Sulphate of Copper in eight fluid ounces of the Water, and to the solution add the Ammonia until the precipitate first formed is nearly dissolved. Clear the solution by filtration, and then add Distilled Water, so that the bulk may be ten fluid ounces.

SOLUTION OF AMMONIO-SULPHATE OF MAGNESIA.

(Ammonio-sulphate of Magnesia = $\text{MgO}, \text{SO}_3 + \text{NH}_4\text{O}, \text{SO}_3$
+ 6HO .)

Take of Sulphate of Magnesia, one ounce ;

Hydrochlorate of Ammonia, half an ounce ;

Solution of Ammonia, half a fluid ounce ;

Distilled Water, a sufficiency.

Dissolve the Sulphate of Magnesia and Hydrochlorate of Ammonia in eight fluid ounces of the Water, and to the solution add the Ammonia, and as much Distilled Water as will make up the bulk to ten fluid ounces.

SOLUTION OF BICHLORIDE OF PLATINUM.

(Bichloride of Platinum = PtCl_2 .)

Take of Thin Platinum Foil, a quarter of an ounce ;

Nitric Acid, a sufficiency ;

Hydrochloric Acid, a sufficiency ;

Distilled Water, seven fluid ounces.

Mix half a fluid ounce of the Nitric Acid with three fluid ounces of the Hydrochloric Acid and two fluid ounces of the Water ; pour the mixture into a small flask containing the Platinum, and digest at a gentle heat, adding more of the Acids mixed in the same proportion, should this be necessary, until the metal is dissolved. Transfer the solution to a porcelain capsule, add to it a fluid drachm of Hydrochloric Acid, and evaporate on a water bath, until acid

vapours cease to be given off. Let the residue be dissolved in the remaining five ounces of Distilled Water, and preserved in a stoppered bottle.

SOLUTION OF BORACIC ACID.

Take of Boracic Acid, fifty grains;
Rectified Spirit, one fluid ounce.

Dissolve.

SOLUTION OF BROMINE.

Take of Bromine, ten minims;
Distilled Water, five fluid ounces.

Place the Bromine in a bottle furnished with a well-fitting stopper, pour on the Water, and shake several times.

SOLUTION OF CARBONATE OF AMMONIA.

Take of Carbonate of Ammonia, in fine powder, half an ounce;
Distilled Water, a sufficiency.

Shake the Carbonate of Ammonia in a bottle with eight fluid ounces of the Water until it is dissolved, and by the addition of more of the Water make up the bulk of the solution to ten fluid ounces.

SOLUTION OF CHLORIDE OF BARIUM.

Take of Chloride of Barium, in crystals, one ounce;
Distilled Water, a sufficiency.

Dissolve the Chloride of Barium in eight fluid ounces of the Water, and add as much Distilled Water as will make the bulk of the solution ten fluid ounces.

SOLUTION OF CHLORIDE OF CALCIUM.

Take of Chloride of Calcium, one ounce;
Distilled Water, a sufficiency.

Dissolve the Chloride of Calcium in eight fluid ounces of the Water, and add as much Distilled Water as will make the bulk of the solution ten fluid ounces.

SOLUTION (SATURATED) OF CHLORIDE OF CALCIUM.

Take of Chloride of Calcium, three hundred and thirty-six grains;
Distilled Water, one fluid ounce.

Dissolve.

SOLUTION OF CHLORIDE OF TIN.

(Chloride of Tin = SnCl_2 .)

Take of Granulated Tin, one ounce;
Hydrochloric Acid, three fluid ounces;
Distilled Water, a sufficiency.

Dilute the Acid in a flask with one fluid ounce of the Water, and, having added the Tin, apply a moderate heat until gas ceases to be evolved. Add as much of the Water as will make up the bulk to five fluid ounces, and transfer the solution, together with the undissolved tin, to a bottle with an accurately ground stopper.

SOLUTION OF CORROSIVE SUBLIMATE.

Take of Corrosive Sublimate, one hundred grains;
Distilled Water, five fluid ounces.

Dissolve, and keep the solution in a bottle impervious to light.

SOLUTION OF FERRIDCYANIDE OF POTASSIUM.

Take of Ferridcyanide of Potassium, in crystals, a quarter of an ounce;
Distilled Water, five fluid ounces.

Dissolve, and keep the solution in a stoppered bottle.

SOLUTION OF FERROCYANIDE OF POTASSIUM.

Take of Ferrocyanide of Potassium, in crystals, a quarter of an ounce;
Distilled Water, five fluid ounces.

Dissolve, and keep the solution in a stoppered bottle.

SOLUTION OF GELATINE.

Take of Isinglass, in shreds, fifty grains ;

Warm Distilled Water, one fluid ounce.

Mix and digest for half an hour on a water bath with repeated shaking, and filter through clean tow moistened with distilled water.

SOLUTION OF HYDROCHLORATE OF AMMONIA.

Take of Hydrochlorate of Ammonia, one ounce ;

Distilled Water, a sufficiency.

Dissolve the Hydrochlorate of Ammonia in eight fluid ounces of the Water, and with Distilled Water make up the bulk to ten fluid ounces.

SOLUTION OF HYDROSULPHURET OF AMMONIA.

(Hydrosulphuret of Ammonia= NH_4S , HS.)

Take of Solution of Ammonia, one fluid ounce.

Conduct into this a stream of Sulphuretted Hydrogen so long as this gas continues to be absorbed, and then transfer the solution to a green-glass bottle furnished with a well-ground stopper.

SOLUTION OF IODATE OF POTASH.

(Iodate of Potash= KO , IO_5 .)

Take of Iodine, fifty grains ;

Chlorate of Potash, fifty grains ;

Nitric Acid, five minims ;

Distilled Water, ten fluid ounces and a half.

Rub the Iodine and Chlorate of Potash together to a fine powder ; place the mixture in a Florence flask, and, having poured upon it half an ounce of the Water acidulated with the Nitric Acid, digest at a gentle heat until the colour of the iodine disappears. Boil for one minute ; then transfer the contents of the flask to a capsule, and evaporate to perfect dryness at 212° . Finally dissolve the residue in the remaining ten ounces of Distilled Water ; filter the solution, and keep it in a stoppered bottle.

SOLUTION OF IODIDE OF POTASSIUM.

Take of Iodide of Potassium, one ounce ;

Distilled Water, a sufficiency.

Dissolve the Iodide of Potassium in eight fluid ounces of the Water, and by the addition of Distilled Water, make up the bulk of the solution to ten fluid ounces.

SOLUTION OF OXALATE OF AMMONIA.

(Oxalate of Ammonia crystallized, $=\text{NH}_4\text{O}, \text{C}_2\text{O}_3 + \text{HO}.$)

Take of Purified Oxalic Acid, one ounce ;

Boiling Distilled Water, eight fluid ounces ;

Carbonate of Ammonia, in powder, a sufficiency.

Dissolve the Oxalic Acid in the Water, neutralize the solution with the Carbonate of Ammonia, filter, cool, and crystallize.

Take of The Crystals of Oxalate of Ammonia thus obtained,
first dried on filtering paper by simple exposure
to air, and free from efflorescence, half an
ounce;

Warm Distilled Water, one pint.

Dissolve.

SOLUTION OF PHOSPHATE OF SODA.

Take of Phosphate of Soda, in crystals, one ounce ;
Distilled Water, a sufficiency.

Dissolve the Phosphate of Soda in eight fluid ounces of the
Water, and add as much Distilled Water as will make the
bulk of the solution ten fluid ounces.

SOLUTION OF SULPHATE OF INDIGO.

(Sulphate of Indigo = $\text{HO}, \text{C}_{16}\text{H}_4\text{NO}, 2\text{SO}_3$.)

Take of Indigo, five grains ;
Pure Sulphuric Acid, one fluid drachm ;
Distilled Water, ten fluid ounces.

Mix the Indigo and the Sulphuric Acid in a small test
tube, and apply the heat of a water bath for an hour. Pour
the blue liquid into the Distilled Water, agitate the mixture,
and, when the undissolved indigo has subsided, decant the
clear liquid into a stoppered bottle.

SOLUTION OF SULPHATE OF IRON.

Take of Granulated Sulphate of Iron, ten grains ;
Boiling Distilled Water, one fluid ounce.

Dissolve.

This solution should be recently prepared.

SOLUTION OF SULPHATE OF LIME.

Take of Plaster of Paris, a quarter of an ounce ;
Distilled Water, one pint.

Rub the Plaster of Paris in a porcelain mortar for a few minutes with two ounces of the Water, introduce the white mixture thus obtained into a pint bottle containing the rest of the Water, shake well several times, and allow the undissolved sulphate to subside. When this has occurred, filter, and preserve the clear solution in a stoppered bottle.

SOLUTION OF TARTARIC ACID.

Take of Tartaric Acid, in crystals, one ounce ;
Distilled Water, eight fluid ounces ;
Rectified Spirit, two fluid ounces.

Dissolve the Tartaric Acid in the Water, add the Rectified Spirit, and preserve the solution in a stoppered bottle.

SOLUTION OF TERCHLORIDE OF GOLD.

(Terchloride of Gold = Au Cl_3 .)

Take of Fine Gold, reduced by a rolling machine to a thin lamina, sixty grains;

Nitric Acid, one fluid ounce;

Hydrochloric Acid, seven fluid ounces;

Distilled Water, nine fluid ounces.

Place the Gold in a flask with one fluid ounce of the Nitric and six fluid ounces of the Hydrochloric Acid, first mixed with four fluid ounces of the Water, and digest until it is dissolved. Add to the solution an additional fluid ounce of Hydrochloric Acid, evaporate at a heat not exceeding 212° until acid vapours cease to be given off, and dissolve the Terchloride of Gold thus obtained in five fluid ounces of Distilled Water. The solution should be kept in a stoppered bottle.

III.

TEST SOLUTIONS FOR VOLUMETRIC ANALYSIS.

Volumetric solutions, before being used, should be shaken, in order that they may be throughout of uniform strength. They should also be preserved in stoppered bottles.

The tube used with these solutions is an Alkalimeter, which, when filled to 0, holds 1000 grains of distilled water at 60° , and is divided into 100 parts of equal capacity.

VOLUMETRIC SOLUTION OF BICHROMATE OF POTASH.

(Bichromate of Potash, $\text{KO}, 2\text{CrO}_3 = 147.5$.)

Take of Pure Bichromate of Potash, 129 grains;

Distilled Water, one pint.

Dissolve.

The quantity of this solution which fills the volumetric tube to 0, contains $\frac{1}{10}$ of an equivalent, in grains, of the Bichromate of Potash, and, when added to a solution of a protosalt of iron acidulated with hydrochloric acid, is capable of converting $\frac{1}{10}$ of six equivalents of iron (16.8 grains) from the state of a protosalt to that of a persalt.

In practising this volumetric process, it is known that the whole of the protosalt has been converted into a persalt when a minute drop of the solution, placed in contact with a drop of the solution of ferridcyanide of potassium on a white plate, ceases to strike with it a blue colour.

VOLUMETRIC SOLUTION OF HYPOSULPHITE OF SODA.

(Hyposulphite of Soda crystallized, $\text{NaO}, \text{S}_2\text{O}_2 + 5\text{HO} = 124$.)

Take of Hyposulphite of Soda, in crystals, 260 grains;

Distilled Water, a sufficiency.

Dissolve the Hyposulphite of Soda in one pint of the Water, and drop the solution cautiously from the volumetric tube into one hundred measures of the volumetric solution of

iodine, until the brown colour of the iodine is just discharged. Note the number of measures (N) which have been used to produce this effect; and having then taken sixteen fluid ounces of the same solution, augment this quantity by the addition of Distilled Water until it amounts to $\frac{1600}{N}$ fluid ounces. If for example $N=96$, the sixteen ounces of the solution of the hyposulphite should be diluted with distilled water so as to become $\frac{1600}{96}=16.66$ fluid ounces.

This Solution is used for estimating free iodine, an object which it accomplishes by forming with the iodine, iodide of sodium and tetrathionate of soda. One hundred measures of it include $\frac{1}{10}$ of two equivalents of the hyposulphite in grains, and therefore correspond to 12.7 grains of free iodine.

VOLUMETRIC SOLUTION OF IODINE.

(Iodine, $I=127$.)

Take of Pure Iodine, in powder, 111.125 grains;

Iodide of Potassium, 150 grains;

Distilled Water, a sufficiency.

Mix the Iodide of Potassium and Iodine in a bottle with eighteen ounces of the Water, agitate until both are dissolved, and, when the solution is complete, add as much more Distilled Water as will make the total bulk exactly one pint.

This solution may be employed for determining the amount of sulphuretted hydrogen or of a metallic sulphuret in a fluid, but is chiefly used for the estimation of sulphurous and arsenious acids. It is dropped from the volumetric tube into the liquid to be tested until free iodine begins to appear in

the solution. 100 volumetric measures of it include 12·7 grains ($\frac{1}{10}$ of an equivalent) of iodine, and therefore correspond to 1·7 grains of sulphuretted hydrogen, 3·2 grains of sulphurous, and 4·95 grains of arsenious acid.

VOLUMETRIC SOLUTION OF NITRATE OF SILVER.

(Nitrate of Silver, AgO , $\text{NO}_5 = 170$.)

Take of Nitrate of Silver, 148·75 grains;

Distilled Water, one pint.

Dissolve, and keep in an opaque stoppered bottle. The quantity of this solution which fills the volumetric tube to 0, includes seventeen grains of nitrate of silver, or $\frac{1}{10}$ of an equivalent of the salt in grains. Upon dropping it into dilute hydrocyanic acid rendered alkaline by soda, the precipitate first formed is upon agitation redissolved, and continues to be so until the whole of the cyanogen of the acid has united with the sodium and the silver, forming the double cyanide of sodium and silver. In such experiments 100 volumetric measures of the solution correspond to 5·4 grains of absolute hydrocyanic acid.

VOLUMETRIC SOLUTION OF OXALIC ACID.

(Oxalic Acid crystallized, HO , $\text{C}_2\text{O}_3 + 2\text{HO} = 63$.)

Take of Purified Oxalic Acid in crystals, quite dry, but not effloresced, 551·25 grains;

Distilled Water, a sufficiency.

Dissolve the Oxalic Acid in eighteen fluid ounces of the Water, and, when the solution is complete, add as much

Distilled Water as will make its bulk exactly twenty fluid ounces at 60°.

The quantity of this solution which fills the volumetric tube to 0, includes exactly sixty-three grains of crystallized oxalic acid, and is therefore capable of neutralizing an equivalent in grains of any alkali, or alkaline carbonate.

VOLUMETRIC SOLUTION OF SODA.

(Soda, $\text{NaO} = 31$.)

Take of Solution of Soda, a sufficiency ;

Distilled Water, a sufficiency.

Fill the volumetric tube to 0 with the Solution of Soda, and drop this into sixty-three grains of purified oxalic acid dissolved in two fluid ounces of the Water, until the acid is exactly neutralized as indicated by litmus. Note the number of measures (N) of the solution used, and having then taken forty fluid ounces of the Solution of Soda, augment this quantity by the addition of Distilled Water, until it becomes $\frac{4000}{N}$ fluid ounces. If for example, $N = 93$, the 40 ounces of solution of soda should be diluted so as to become $\frac{4000}{93} = 43.01$ fluid ounces.

The quantity of this solution which fills the volumetric tube to 0, includes thirty-one grains of soda, and will therefore neutralize an equivalent in grains of any monobasic acid.

APPENDIX C.

SYMBOLS AND EQUIVALENT WEIGHTS OF ELEMENTARY BODIES
MENTIONED IN THE BRITISH PHARMACOPŒIA.

Elementary Bodies	Symbols	Equivalent Weights
Aluminum	Al	13·75
Antimony (Stibium) .	Sb	122
Arsenic	As	75
Barium	Ba	68·5
Bismuth	Bi	210
Boron	B	11
Bromine	Br	80
Calcium	Ca	20
Carbon	C	6
Chlorine	Cl	35·5
Chromium	Cr	26·25
Copper (Cuprum) . .	Cu	31·75
Gold (Aurum) . . .	Au	196·5
Hydrogen	H	1
Iodine	I	127
Iron (Ferrum). . . .	Fe	28
Lead (Plumbum) . .	Pb	103·5
Lithium	L	7
Magnesium	Mg	12
Manganese	Mn	27·5
Mercury (Hydrargyrum) .	Hg	100
Nitrogen	N	14
Oxygen	O	8
Phosphorus	P	31
Platinum	Pt	98·5
Potassium (Kalium) .	K	39
Silver (Argentum) . .	Ag	108
Sodium (Natrium) . .	Na	23
Sulphur	S	16
Tin (Stannum) . . .	Sn	59
Zinc	Zn	32·5

APPENDIX D.



RELATION OF MEASURES TO WEIGHTS OF THE BRITISH PHARMACOPŒIA.

1 Gallon	. . =	the measure of 10	pounds of water.
1 Pint	. . . =	„ 1.25	„ „
1 Fluid ounce	. =	„ 1	ounce „
1 Fluid drachm	=	„ 54.68	grains „
1 Minim	. . =	„ 0.91	„ „

RELATION OF WEIGHTS OF THE BRITISH PHARMACOPŒIA TO METRICAL WEIGHTS.

1 Pound	=	453.5925	grammes.
1 Ounce	=	28.3495	„
1 Grain	=	0.0648	„

RELATION OF MEASURES OF THE BRITISH PHARMACOPŒIA TO METRICAL MEASURES.

1 Gallon	. . =	4.543487	litres.
1 Pint	. . . =	0.567936	„
1 Fluid ounce	. =	0.028396	„
1 Fluid drachm	=	0.003549	„
1 Minim	. . =	0.000059	„

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PLATES OF OFFICINAL PLANTS.

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